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Catalogue 75-001E Quarterly

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# PERSPECTIVES

ON LABOUR AND INCOME

SPRING 1995

- '94 IN REVIEW
- THE HORSELESS CARRIAGE
- MISSING WORK
- NEWEST WORKERS
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- MEASURING PRODUCTIVITY
- GREYING OF THE WORKFORCE



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# PERSPECTIVES

ON LABOUR AND INCOME

## ■ Departments

- 3 Forum
- 4 Highlights
- 39 What's new?
- 43 Key labour and income facts
- 55 In the works



## Perspectives on Labour and Income

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## ■ Articles

### SUPPLEMENT

#### The labour market: Year-end review

*Ernest B. Akyeampong*

A wrap-up of changes and trends in the labour market in 1994.

#### 7 The horseless carriage

*Pina La Novara*

The automotive industry comprises not only the manufacture or assembly of automotive parts and vehicles, but also the distribution, servicing and maintenance of the finished products. This article looks at the workforce involved in this important industry.

#### 12 Missing work

*Ernest B. Akyeampong*

During the last decade, time lost from work because of illness or disability declined, while days lost as a result of personal or family responsibilities increased. This study examines rates and levels by industry.

#### 17 Canada's newest workers

*Tina Chui and Mary Sue Devereaux*

Immigration is a major source of new workers. This article profiles Canada's "newest" workers and compares their characteristics with those of Canadian-born workers.



# PERSPECTIVES

ON LABOUR AND INCOME

## ■ Editor-in-Chief

Ian Macredie  
(613) 951-9456

## ■ Managing Editor

Cécile Dumas  
(613) 951-6894

## ■ Assistant Managing Editor

Henry Pold  
(613) 951-4608

## ■ Editors

Susan Crompton  
Mary Sue Devereaux  
Catherine Hardwick  
Henry Pold

## ■ Data and Graphics

Pino Battisti  
Mary McAuley  
Lucie Parisien  
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Suzanne David

## ■ Design and Composition

Dissemination Division

## 24 Update on RRSP contributions

*Hubert Frenken*

A look at the 1993 growth in the number of RRSP contributors and the amounts invested in this tax-assisted retirement savings program.

## 26 Measuring productivity

*Diane Galarneau and Jean-Pierre Maynard*

When productivity increases in a sector, does it mean employment growth? This article explores the question and introduces a new concept: multifactor productivity.

## 33 Greying of the workforce

*Report on a symposium*

A summary of the one-day Symposium on the Greying of the Workforce, which explored the myths and realities of the situation facing older workers, as well as the implications for the coming decades.

## Symbols

The following standard symbols are used in Statistics Canada publications:

..	figures not available
...	figures not appropriate or not applicable
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--	amount too small to be expressed
p	preliminary figures
r	revised figures
x	confidential to meet secrecy requirements of the Statistics Act

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# Forum

## Letter from the Editor-in-Chief

■ In this issue, *Perspectives* publishes a brief summary of presentations at our second annual symposium, "Greying of the workforce," held in September. One of the day's most important discussions was triggered by figures on the declining labour force participation rate of men over 55. Withdrawal from the labour market before the traditional retirement age of 65 has tremendous repercussions for social programs, as ably outlined by the symposium participants, since not all early retirees may be financially ready to leave the workforce. Those who retire voluntarily are presumably confident of their self-sufficiency; but those whose retirement is forced upon them may not be able to bridge the gap of months or years between the cessation of work and their eligibility for pension benefits. The implicit question is, "Now that they no longer work until they are nudging 'old age,' what will healthy, active, younger retirees do?"

Apart from considerations about the public purse, the unease underlying this question seems to concern something that society is not clear about anymore: the division of time into "productive time" devoted to paid work and time that is spent on other, non-paying, activities. There is a growing belief that, as a society, we might wish to redefine work to include uses of time that have not historically been considered "work"; for example, the many services we provide to one another outside the formal labour market.

Researchers know a great deal about the time people spend doing paid work because statistical agencies world-wide continually monitor labour market activity. In identifying who is employed, who is unemployed, and who is not in the labour force, labour market surveys conduct a de facto investigation into their use of time. Of course, as chronicles of time use, labour market surveys are very restricted. Nevertheless, we sometimes extend the coverage of labour market surveys to capture uses of time for other than labour market activities. For example, during the 1990-92 recession, the labour force participation rates in Canada and the United States declined, as analysts expected. Analysts also expected the people who dropped out of the labour force to re-appear in the pool of discouraged workers, but many did not. The explanations most frequently put forward were

that they had retired or gone back to school. A supplement to the regular Labour Force Survey – the November 1992 Survey of Persons Not in the Labour Force – was conducted to find out what the labour force drop-outs were then doing.

Although it is possible to use labour market surveys to make inferences about non-market activities, the results are insufficient. What is needed are time-use surveys to stitch the whole gamut of daily productive activities together. Time-use surveys are highly valued in many countries, and their use is growing. It is possible that, as part of Canada's social policy review, analysts will demand more comprehensive time-use data to chart the territory that lies beyond paid work. If this is the case, time-use surveys may be increasingly relied upon to develop policies and programs targeted to the needs of a greying workforce, among others. They should also help analysts better understand the nature and severity of "time crunch," the dramatic collision between our multiplying responsibilities and our time, as exemplified by the work-and-family conflict.

Speaking of time, I hope you will take some to consider our new layout, which is intended to make better use of space and to clarify charts and tables. *Perspectives* invites your comments.

Ian Macredie  
Editor-in-Chief



**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

Statistics Canada reserves the right to select and edit items for publication. Correspondence, in either official language, should be addressed to: Susan Crompton, Forum and What's new? Editor, *Perspectives on Labour and Income*, 5-D Jean Talon Building, Statistics Canada, Ottawa, K1A 0T6. Telephone (613) 951-0178; fax (613) 951-4179.



# Highlights

## ■ The horseless carriage

- The automobile industry is more than automobile fabricating and assembling. The manufacturing component also includes trucks, snowmobiles, motorcycles, all-terrain vehicles, trailers, campers and other recreational vehicles, and the parts and accessories for all of them. As well, the automotive industry encompasses the selling and servicing of those vehicles.
- Over half a million people worked in the automotive industry in 1993. Almost three-quarters of them worked in the service side. The remainder were involved in the production of vehicles, parts and accessories.
- In 1993, the majority (64%) of people working in the automotive industry were hourly paid employees, making above-average wages, whether they worked in manufacturing or in services. Average weekly earnings for workers in automotive manufacturing were \$673, compared with \$549 for workers in the total manufacturing sector that year. The pattern was similar in automotive services.
- The volume of wholesale trade of motor vehicles, parts and accessories was over \$24 billion in 1992, representing 8% of all wholesale trade in Canada. Retail sales of new and used automotive vehicles, accessories, parts and repair services totalled almost \$64 billion in 1992. The automotive group accounted for over one-third of total retail trade in the country.
- The automotive industry prospered in the 1980s. However, after the onset of the recession in 1990, employment dropped by over 70,000 (-12%) between 1990 and 1991 and then remained virtually unchanged between 1991 and 1993.

## ■ Missing work

- The proportion of full-time employees absent from work in any given week for personal reasons (namely "illness or disability" and "personal or

family responsibilities") has changed little over the past decade. However, time lost per worker has increased.

- Over the decade, time lost because of illness or disability declined (from 6.7 days in 1983 to 6.1 days per full-time worker in 1993), while it increased for personal or family responsibilities (from 1.9 days to 3.3).
- The decline in absences because of illness or disability was greater among male workers (from 6.5 days in 1983 to 5.7 days in 1993) than among female workers (from 7.0 days to 6.7 days). This reflects men's concentration in the goods-producing industries, where the largest reductions have occurred.
- The increase in time lost for personal or family responsibilities is largely attributable to the growing number of employed mothers. Since working women continue to perform most family chores, the challenges they face in balancing work and family responsibilities tend to be greater than those faced by men. In 1983, full-time female employees lost an average of 3.8 days to attend to personal or family responsibilities; by 1993, the figure had risen to 6.7 days. For men, time loss due to this reason remained below one day.
- Over the decade, days lost because of illness or disability declined in all the broad industry groups (except transportation, communication and other utilities, where time lost remained stable). The largest decrease was in the goods-producing industries. Time lost per full-time worker fell by almost a full day in manufacturing, and by more than a day in other primary industries and in construction.
- Absences because of personal or family responsibilities, on the other hand, have increased since 1983 in all the broad industry groups. The largest increases occurred in the generally female-dominated service-producing industries. Average annual days missed by full-time workers jumped by two full days in finance, insurance and real estate and in services.



## ■ Canada's newest workers

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- New workers are not all young people emerging from the education system – a substantial number are recent immigrants.
- In 1991, Canada's workforce included about 366,000 people aged 15 and over who had immigrated during the 1986 to 1991 period. They found employment in a variety of occupations ranging from professional and managerial fields to services and product fabricating.
- Half of recent immigrant workers were from Asia. Another 22% came from Central and South America, Africa, or the Caribbean and Bermuda.
- The recent immigrant workforce tends to be young. In 1991, 42% of employed recent immigrants were aged 25 to 34, compared with 30% of the Canadian-born.
- The majority of workers – recent immigrant or not – have full-time jobs. Among men, the proportions employed full time in 1991 were almost the same for recent immigrant and Canadian-born workers: 84% and 85%. In contrast, the proportion of women working full time was higher among recent immigrants: 72% versus 68%.

## ■ Update on RRSP contributions

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- In 1993, 5.1 million Canadians claimed \$19.2 billion as RRSP deductions on their tax returns, an increase of 7% in contributors and 20% in contributions over the previous year.

## ■ Measuring productivity

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- Productivity growth measures the improvement in the efficiency with which a business, industry or country produces goods and services. Productivity is a key component of economic growth; without its contribution, national output would increase only with larger quantities of the factors of production.
- Productivity can be examined in terms of the full range of inputs or just a single factor such as labour or capital. By far the most widely used measure is labour productivity. This partial measure has long been the only one available.

However, since 1989, a broader measure – multifactor productivity – has been produced by Statistics Canada. This article compares the two measures and their trends in recent years. It also looks at the relationship between multifactor productivity and hours worked (or employment).

- Generally speaking, labour productivity has a higher growth rate than multifactor productivity. However, the trends in both measures show that the productivity growth rate began to slow in 1975.
- Taking all industries together, changes in total hours worked and multifactor productivity moved in tandem between 1961 and 1991. However, on an industry-by-industry basis, increases in productivity sometimes coincided with decreases in the number of hours worked. This reflects in part the adjustment costs that must be made when production becomes more efficient.

## ■ Greying of the workforce

### Report on a symposium

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- Canada's population is aging. From 1993 to 2015, the older segments of the potential workforce (45 to 54 and 55 to 64 age groups) will grow dramatically: 155% and 194%, respectively. During the same period, the population aged 15 to 24 will increase by only 5%.
- On September 30, 1994, a one-day symposium on the "Greying of the workforce" was held at Statistics Canada. Presentations by researchers, employers, workers, and representatives from labour unions and self-help groups explored the myths and realities facing older workers. The views expressed at the symposium include the following:
  - One speaker presented findings from studies of the internal policies and practices of private firms. It seems that there are currently no mechanisms for managing an aging workforce, nor are there any appropriate human resource management tools. By default, two admittedly inadequate measures are used: retirement and disability insurance plans.
  - There is a great diversity in roads to retirement and in the ages at which people retire (from their early 50s to past 65). One researcher mentioned that involuntary retirement most often affects



blue-collar workers and those with lower educational attainment, while voluntary retirement is more common among well-educated professionals who receive early pension benefits and buy-outs.

- Even during good years, displaced older workers fare poorly in the labour market. It was noted that for most of them, industrial or regional mobility is not an option. Workers must somehow be insured against the risk of layoff between ages 50 and 65.
- The public sector has faced some of the same constraints and challenges that have confronted the private sector. As a result, there have been efforts to reduce and restructure the public service. It was said that management prefers early retirement over other means of workforce reduction. Older workers are usually at the top of the pay ladder, so diminishing their numbers will lower salary costs.
- It was concluded that aging-and-retirement policies and practices should seek a balance in governments' need for fiscal restraint, employers' need to be competitive and to create career paths for younger employees, and individuals' need for well-being.

## ■ What's new?

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- In January 1995, the Labour Force Survey population counts were updated to reflect the 1991 Census results, and the entire time series was revised back to 1976.
- *A Portrait of Persons with Disabilities*, based on data from the 1991 Health and Activity Limitation Survey, discusses the population with disabilities in terms of education, labour force participation, employment, unemployment and income. It also discusses barriers to employment.
- *Work absence rates 1977 to 1994* presents data from the Labour Force Survey showing trends in absences from work over the last 18 years.
- The National Physician Data Base, managed by Health Canada, presents some information on selected characteristics of physicians. The longitudinal data cover the fiscal years 1989-90 to 1992-93.
- The School Leavers Follow-up Survey is now in the field. This follow-up to the 1991 School Leavers Survey is collecting information on school-to-work transitions of the respondents to the original survey, now aged 22 to 24.
- Over the course of the year, about 10,000 people will be interviewed for Cycle 10 of the General Social Survey on the family. The focus of the interview is family relationships, and the survey will include modules on history of marriages and common-law relationships; children and custody arrangements; paid and unpaid work, including hours spent doing that work; and paid work interruptions and reasons for such interruptions.

□



# The horseless carriage

Pina La Novara<sup>1</sup>

To say that automobiles play an important role in today's economy is to state the obvious. But just how large is the automotive industry? It is not just the manufacture of automobiles. The manufacturing component also includes trucks, snowmobiles, motorcycles, all-terrain vehicles, trailers, campers, other recreational vehicles, and the parts and accessories for all of them. As well, the automotive industry encompasses the selling and servicing of those vehicles. In 1993, the industry employed more than half a million people with an average weekly payroll of nearly \$300 million.

Using primarily data from the Survey of Employment, Payrolls and Hours (SEPH), this article examines Canada's automotive industry from 1983 to 1993. The industry grouping consists of industries involved in the manufacture or assembly of parts and vehicles, the distribution of vehicles, parts and accessories, and the servicing and maintenance of the finished products (see *Automotive industries*).

## Automobiles drive the economy

Automotive products accounted for more than a quarter (\$48 billion) of total Canadian exports in 1993.<sup>2</sup> The same year, the automotive industry's annual payroll was almost \$15 billion, about 4% of total wages and salaries. These figures, however, understate the real importance of the industry in the economy.

*The study was done while the author was on an assignment in the Labour Division. For further information, contact Henry Pold, Labour and Household Surveys Analysis Division at (613) 951-4608.*

Automotive manufacturing provides an economic base for many other industries, particularly those processing raw materials. For example, automobiles are a major user of steel, aluminum and copper. The increasing use of plastics and composites in motor vehicles may well have substantial repercussions on firms engaged in the extraction and processing of these metals. Among other industries closely tied to the automotive industry are business services such as advertising and engineering.

The industry also figures prominently in trade, both wholesale and retail. The volume of wholesale trade of motor vehicles, parts and accessories was over \$24 billion in 1992 and represented 8% of all wholesale trade in Canada.<sup>3</sup> Retail sales of new and used vehicles, accessories, parts and repair services totalled almost \$64 billion in 1992. This group accounted for 34% of total retail trade, giving it

the largest share of retail sales at the national level, just ahead of food, beverage and drug stores.

## A major source of employment

The importance of the automotive industry to the Canadian economy is apparent in the size of its workforce (Table 1). In 1993, the industry had an annual average employment level of more than 520,000 – accounting for 5% of industrial aggregate employment.<sup>4</sup> Almost three-quarters of the employees in the automotive industry worked in the service side; the remainder were involved in the production of vehicles, parts and accessories.

Approximately 9% of all manufacturing jobs in 1993 were in automotive manufacturing, an increase from 7% in 1983. The other component of the industry, automotive services, made up almost 5% of all service sector employment.

Table 1  
Automotive industry employment, 1993

	Total	Manufacturing	Services
		'000	
<b>Canada</b>	<b>522</b>	<b>140</b>	<b>382</b>
Newfoundland	6	--	6
Prince Edward Island	2	--	2
Nova Scotia	13	1	13
New Brunswick	9	--	9
Quebec	103	13	89
Ontario	257	116	141
Manitoba	16	3	13
Saskatchewan	16	1	15
Alberta	40	2	37
British Columbia	60	3	57

Source: Survey of Employment, Payrolls and Hours

Note: See Automotive industries for components of this industry.



### Ontario in the driver's seat

Some provincial economies depend more on the automotive industry than do others. In 1992, almost 70% of the total volume of wholesale trade of motor vehicles, parts and accessories originated in Ontario, followed by Quebec with 11% and British Columbia with 7%. As well, automotive wholesaling had a greater impact on Ontario's trade figures than it had on those of other provinces. For instance, in 1992 it represented 12% of the province's total wholesale trade, compared with 8% in New Brunswick and 6% in British Columbia.

The provincial distribution of retail sales of new and used automotive vehicles, parts, accessories and repair services mirrors the relative size of each province's population. In 1992, Ontario accounted for 38% of automotive retail sales while Quebec claimed 24% and British Columbia 13%. Within each province, automotive sales represented roughly one-third of total retail trade.

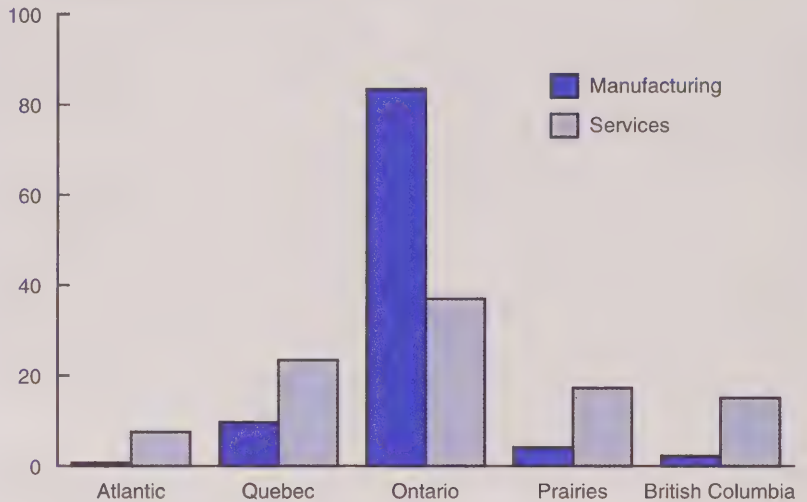
On the other hand, the distribution of the automotive industry's total payrolls reflects the concentration of activity in a few provinces. For example, in 1993 three-quarters of total payrolls went to Ontario and Quebec.

In 1993, Ontario employed almost half of all automotive industry employees (49%), somewhat more than its 40% of Canada's workforce. The concentration was even more pronounced in automotive manufacturing. Ontario employed over 80% of all automotive manufacturing workers (Chart A). In fact, Ontario and Quebec accounted for virtually all of the country's automotive manufacturing activity (93%), with vehicle assembly plants and automotive parts plants in the southern Ontario communities of Windsor, Oshawa, St. Catharines, Mississauga, Markham, Scarbor-

Chart A

### Ontario is the motor vehicle capital of Canada.

% of total automotive employment in 1993



Source: Survey of Employment, Payrolls and Hours

ough, and Oakville and in the Quebec communities of Bromont, Sainte-Thérèse, Joliette and Lachine.

The distribution of employment in automotive services more closely reflected the relative populations of the provinces: Ontario had a 37% share, and Quebec, 23%.

### Impact of the recent recession

The automotive industry prospered in the 1980s following the 1981-82 recession. Between 1983 and 1990, employment increased by a third (150,000). After the onset of the recession in 1990, however, almost half of this growth was wiped out as employment dropped by over 70,000 (-12%) between 1990 and 1991 and then remained virtually unchanged between 1991 and 1993.

The effect of the recent recession was widespread. Between 1990 and 1992, employment de-

creased or remained static in all 13 component automotive industries. However, in 1993 most of them increased employment.

In 1990, annual average manufacturing employment was down 10,000 from the previous year. Between 1990 and 1992, employment declined a further 17,000 (-11%). There was, however, an increase of approximately 5% between 1992 and 1993.

Whereas manufacturers may curtail production as soon as they see their inventories building, service-oriented establishments do not react as quickly to an economic slowdown. Consequently, employment losses began one year later in automotive services (Chart B), with a 13% decrease between 1990 and 1991. Although manufacturing employment began to grow in 1993, automotive services lagged, with a further slight drop, bringing the total decline between 1990 and 1993 to 63,600.

The recession hit Ontario particularly hard. After climbing from 222,000 in 1983 to 292,400 in 1990, employment in the automotive industry plunged to 250,300 in 1991.<sup>5</sup> Since then the level has risen only 3%, reaching 257,500 in 1993.

### Most automotive employees paid by the hour

In 1993, the majority (64%) of people working in the automotive industry were hourly paid employees (see *Types of employees* and Table 2). They made up 79% of automotive manufacturing employees and 58% of automotive service employees.

Whether they work in manufacturing or in services, hourly paid automotive industry employees earn above-average wages. Average weekly earnings (excluding overtime) for workers in automotive manufacturing were consistently above the average for the total manufacturing sector between 1983 and 1993. By 1993, weekly earnings for workers in automotive manufacturing averaged \$673, compared with \$549 for all manufacturing workers.

The pattern is similar in automotive services, where average weekly earnings of hourly paid

### Types of employees

The Survey of Employment, Payrolls and Hours classifies employees into the following categories:

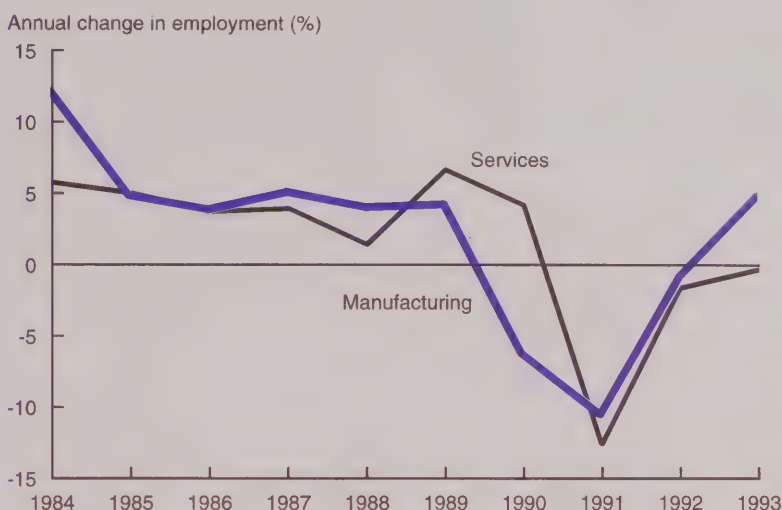
**Employees paid by the hour:** employees whose basic wage is expressed as an hourly rate

**Salaried employees:** employees whose basic remuneration is a fixed amount for at least one week

**Other employees:** employees whose basic remuneration is in the form of commission, piece rates, mileage allowance, etc.

Chart B

**The recent recession hit automotive manufacturing earlier than automotive services.**



Source: Survey of Employment, Payrolls and Hours

Table 2  
**Automotive industry employees**

	Total	Hourly paid	Salaried	Other*
	'000			
1983	446	278	146	22
1984	479	307	145	27
1985	503	327	146	30
1986	522	334	155	33
1987	544	341	155	48
1988	555	353	157	45
1989	589	372	171	46
1990	597	373	180	44
1991	525	324	158	43
1992	517	327	152	38
1993	523	332	146	45

Source: Survey of Employment, Payrolls and Hours

Note: See Automotive industries for components of this industry.

\* Commission and piece work

employees have consistently exceeded those of hourly paid employees in the total service sector. However, the gap is not nearly as large as in manufacturing. In 1993, average weekly earnings of

automotive service workers were \$357, versus \$332 for service sector workers overall.

The large gap in average weekly earnings between employees in automotive manufacturing



## Automotive industries

The industries (SICs) are defined in *Standard Industrial Classification 1980*, Catalogue 12-501E.

### Manufacturing

**Motor vehicle industry** (SIC 323): establishments primarily engaged in manufacturing passenger automobiles, buses, truck chassis and truck tractors.

**Truck, bus body and trailer industries** (SIC 324): establishments primarily engaged in manufacturing truck and bus bodies, commercial and non-commercial trailers and mobile homes.

**Motor vehicle parts and accessories industries** (SIC 325): establishments primarily engaged in manufacturing motor vehicle engines and engine parts, motor vehicle wiring assemblies, motor vehicle stampings, motor vehicle steering and suspension parts, motor vehicle wheels and brakes, motor vehicle fabric accessories and other motor vehicle parts and assemblies, whether of metal or other materials, including plastic.

**Other transportation equipment industries** (SIC 329): establishments primarily engaged in manufacturing transportation equipment not elsewhere classified (all-terrain vehicles, amphibious vehicles, snowmobiles, off-highway tracked vehicles).

### Distributive services

**Motor vehicles, wholesale** (SIC 551): establishments primarily engaged in wholesale dealing in motor vehicles and motor vehicle parts and accessories. Includes buses, dump trucks, school buses, truck tractors, recreational vehicles, snowmobiles, campers, motorcycles, travel trailers.

**Motor vehicle parts and accessories, wholesale** (SIC 552): establishments primarily engaged in

wholesale dealing in tires, tubes and other motor vehicle parts and accessories.

**Automobile dealers** (SIC 631): establishments primarily engaged in retail dealing in new and/or used automobiles.

**Recreational vehicle dealers** (SIC 632): establishments primarily engaged in retail dealing in motor homes and travel trailers, boats and outboard motors, motorcycles, snowmobiles and other recreational vehicles. May also be engaged in the sale of parts and accessories for, and in the repair of, the vehicles they sell.

### Maintenance services

**Gasoline service stations** (SIC 633): establishments primarily engaged in retail dealing in gasoline, lubricating oils and greases. Included are industries primarily engaged in lubricating motor vehicles.

**Automobile parts and accessories stores** (SIC 634): establishments primarily engaged in retail dealing in home and auto supplies, tires, batteries and parts and accessories for motor vehicles.

**Motor vehicle repair shops** (SIC 635): establishments primarily engaged in motor vehicle general repairs, paint and body work, muffler replacement, glass replacement, transmission repair and replacement and other specialized repair work.

**Other motor vehicle services** (SIC 639): establishments primarily engaged in car washing and other services. Includes rust proofing, towing, customizing vans, diagnostic centres.

**Automobile and truck rental and leasing services** (SIC 992): establishments primarily engaged in renting and leasing passenger cars or trucks without drivers.

and those in automotive services is explained partly by their work hours: 37.7 (excluding overtime) compared with 32.0. Hourly paid employees in automotive manufacturing also earn more per hour on average than their counterparts in automotive services (\$18 versus \$11, excluding overtime). This is explained to some extent by the high degree of unionization in the manufacturing sector.<sup>6</sup> As well, given the profound changes in the manufacturing process, many workers must now have highly specialized skills and can therefore command higher wages.

Nonetheless, average hourly earnings increased 3.6% in 1993 for hourly paid employees in automotive services, compared with 2.7% for those in automotive manufacturing, possibly reflecting the continuing squeeze on manufacturing jobs. By contrast, the inflation rate for 1993 was just 1.8%.

## Conclusion

The broadly defined automotive industry is a key sector of the economy in terms of production, trade and employment. This is especially the case in Ontario. The industry makes a significant contribution to the country's gross national product. But the continuing restructuring of the industry both internally, with increased automation, and externally, with increased globalization, will doubtless have a substantial impact on the workers involved and on the economy as a whole. □

The author wishes to thank Michel Girard and Thomas Petersen from Industry Measures and Analysis Division and Bill Morris from Industry Canada for their valuable comments and suggestions in reviewing this article.

## ■ Notes

1 A version of this article was released in *Employment, Earnings and Hours*, August 1994, Catalogue 72-002.

2 A significant portion of this is because of the Autopact, which in effect integrated Canadian and American production.

3 The figure would be significantly higher if the wholesale activities of the major manufacturers were included. The major automobile manufacturers all ship directly to their network of dealers, eliminating any intermediate wholesale activity. Automobile wholesalers covered in this industry handle low-volume and used vehicles.

4 SEPH does not survey establishments in agriculture, fishing and trapping, religion, private households or other government (embassies and consulates of foreign governments). The total employment figure estimated by SEPH is labelled the industrial aggregate.

5 Automotive workers and their employers contribute to a special plan, Supplementary Unemployment Benefits (SUB), which tops up their UI benefits to 90% of regular earnings. These SUBs may make employers less reluctant to lay off staff.

6 In 1992, for instance, the unionization rate in motor vehicle manufacturing, SIC 323, was 61% compared with 10% in wholesale trade and 12% in retail trade.

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# Missing work

Ernest B. Akyeampong

The proportion of full-time employees absent from work for personal reasons (namely, "illness or disability" and "personal or family responsibilities") at some time during each week has changed little over the past decade. Nevertheless, total time lost has increased.

In 1993, an estimated 5.9% of all full-time employees were absent from work for all or part of any given week for personal reasons, virtually the same rate as in 1983 (6.0%). However, the proportion of time missed from the usual weekly work hours (inactivity rate) had risen from 3.4% to 3.7% per full-time worker. This translates into an increase from 8.6 days in 1983 to 9.3 days in 1993 (see *Data source, definitions and measurements*). While the change for each worker may appear small, the increase in work time missed by all 8.2 million employees was a significant 5.7 million days in 1993.

Throughout the decade, workers lost more time because of illness or disability than they did to attend to personal or family responsibilities. However, during this period, time lost because of illness or disability declined (from 6.7 to 6.1 days per full-time worker), while it increased for personal or family responsibilities (from 1.9 to 3.3 days). This article examines the underlying factors and the resulting impact on absence rates in different industries.

## Illness down, family responsibility up

A number of factors have contributed to the decline in absences

*Ernest B. Akyeampong is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-4624.*

## Data source, definitions and measurements

The data in this article are annual averages from the Labour Force Survey (LFS). The data refer to full-time paid workers holding only one job. Part-time paid workers, the self-employed and unpaid family workers are excluded, because they generally have more opportunity to arrange their work schedules around personal or family responsibilities. Multiple jobholders are excluded because it is not possible, using LFS data, to allocate time lost, or the reason for it, to specific jobs.

**Personal reasons** for absence are split into two categories: "own illness or disability," and "personal or family responsibilities." Absences for these two reasons represented about 32% of all time lost by full-time paid workers every week in 1993. Vacations, which accounted for about 45% of total work time lost, are not counted in this study, nor are statutory holidays, which represented 17%.

Absences related to pregnancy or maternity (certainly not considered an absenteeism factor) are in-

cluded in the personal or family responsibilities code in the LFS.<sup>1</sup> While this tends to exaggerate absence levels among some groups of women, the effect on the rate for women overall is probably small. Paternity leave is also included in the personal or family responsibility code, but since the availability and use of this type of leave are believed to be low, the effect on men's absence rates is likely negligible.

The **incidence** of absence is the percentage of full-time paid workers reporting some absence in the reference week. In calculating incidence, the length of work absence – whether an hour, a day, or a full week – is irrelevant.

The **inactivity rate** shows hours lost as a proportion of the usual weekly hours of all full-time paid workers. It takes into account both the frequency and length of absence.

**Days lost per worker** are calculated by multiplying the inactivity rate by the estimated number of working days in the year (250).

because of illness or disability: the shift of employment from the more hazardous goods-producing industries to the less physically demanding service industries; improved safety measures and awareness programs; healthier working conditions (for example, non-smoking and/or designated smoking areas); and wellness and fitness programs. The decline was greater among male workers – from 6.5 days in 1983 to 5.7 days in 1993 – than among female workers – from 7.0 days to 6.7 days (Table). This reflects, at least in part, men's concentration in the goods-producing industries,

where the largest reductions have occurred.

The increase in time lost for personal or family responsibilities is largely attributable to the growing participation of women (many of whom have small children) in paid employment. Working women continue to have more responsibility than men for family chores, such as caring for sick children or older family members (Marshall, 1993 and 1994). Because of the unequal sharing of such duties, women's absence rate is much higher than men's.<sup>2</sup> In 1983, full-time female employees

Table  
Absences for personal reasons, full-time paid workers, 1993

	Incidence*			Inactivity rate**			Annual days lost per worker †		
	Total	Illness or disability	Personal or family responsibilities	Total	Illness or disability	Personal or family responsibilities	Total	Illness or disability	Personal or family responsibilities
	%						days		
<b>Both sexes</b>	<b>5.9</b>	<b>3.8</b>	<b>2.1</b>	<b>3.7</b>	<b>2.4</b>	<b>1.3</b>	<b>9.3</b>	<b>6.1</b>	<b>3.3</b>
Men	4.5	3.4	1.1	2.6	2.3	0.3	6.5	5.7	0.9
Women	7.8	4.3	3.6	5.3	2.7	2.7	13.4	6.7	6.7
<b>All industries</b>	<b>5.9</b>	<b>3.8</b>	<b>2.1</b>	<b>3.7</b>	<b>2.4</b>	<b>1.3</b>	<b>9.3</b>	<b>6.1</b>	<b>3.3</b>
Goods sector	5.6	3.9	1.7	3.5	2.7	0.8	8.7	6.7	2.0
Agriculture	4.2	--	--	2.1	--	--	5.2	--	--
Other primary	4.7	3.5	--	3.0	2.5	--	7.5	6.4	--
Manufacturing	6.0	4.2	1.8	3.8	2.9	0.9	9.6	7.3	2.3
Construction	4.3	3.0	1.3	2.6	2.2	0.4	6.6	5.4	1.1
Service sector	6.0	3.7	2.3	3.8	2.3	1.5	9.6	5.8	3.8
Transportation, communication and other utilities	5.9	4.1	1.8	4.0	2.9	1.1	9.9	7.3	2.6
Trade	5.0	3.1	1.9	2.9	1.9	1.1	7.4	4.7	2.7
Finance, insurance and real estate	5.6	2.9	2.7	3.6	1.7	1.9	8.9	4.1	4.8
Services	6.4	3.8	2.6	4.2	2.4	1.8	10.5	5.9	4.6
Public administration	6.9	4.7	2.3	4.1	2.8	1.3	10.3	7.1	3.3

Source: Labour Force Survey

\* Absent workers divided by total employed

\*\* Hours absent divided by hours usually worked

† Inactivity rate multiplied by working days in year (250)

lost an average of 3.8 days to attend to personal or family responsibilities; by 1993, the figure had risen to 6.7 days (matching the time they lost because of illness or disability). Among men, however, work time lost on account of personal or family responsibilities remained virtually unchanged, at just under one day.

### Impact on industry rates

The average full-time worker lost 9.3 days for both personal reasons combined in 1993. However, the increase from the 1983 figure (8.6 days) was not universal. In fact, time lost declined in most goods-producing industries, but rose in each of the major service-producing industries. As a result, the ranking of the major industries, in terms of time lost, changed. In

1983, manufacturing workers missed the most time, but by 1993, services, public administration, and transportation, communication and other utilities had pushed manufacturing into fourth place. Agriculture maintained the best record over the period.

### Illness or disability absences

Over the decade, days lost because of illness or disability declined in all the major industries (except transportation, communication and other utilities, where time lost remained stable) (Chart). The largest decrease was in the major goods-producing industries. Time lost per full-time worker fell by almost a full day in manufacturing, and by more than a day in other primary industries (-1.3 days) and in construction

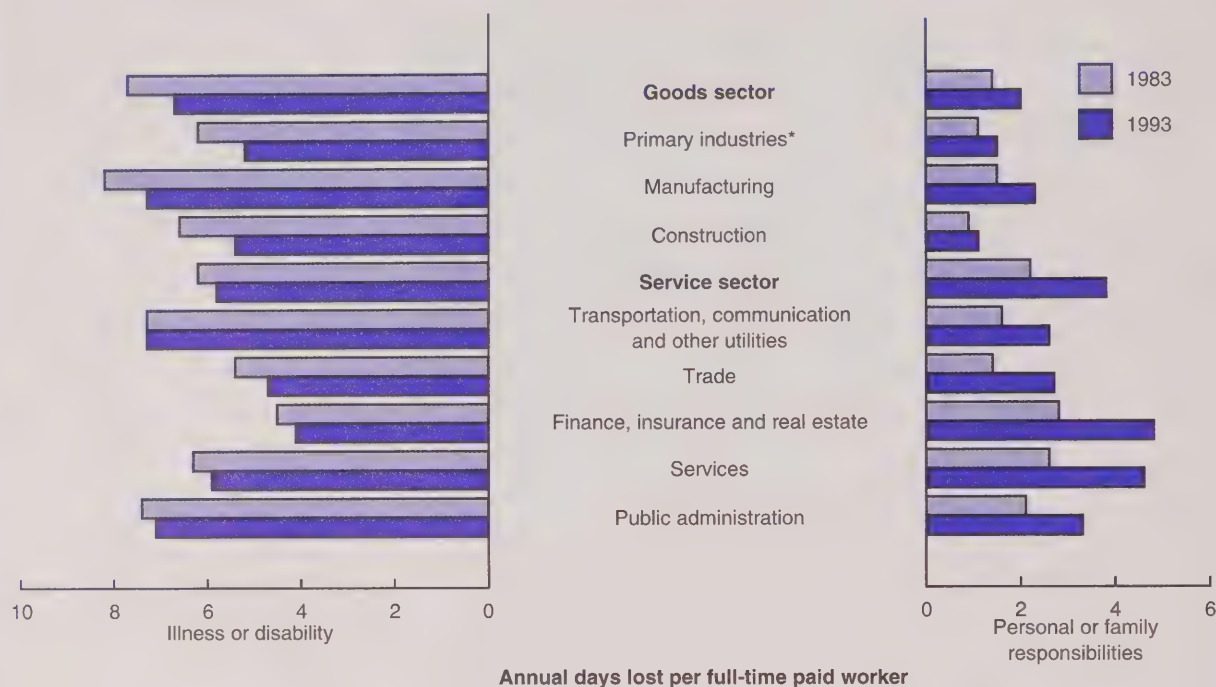
(-1.2 days). The reduction in time lost for this reason was generally less than half a day in most of the service-producing industries.

### Personal or family responsibility absences

Absences because of personal or family responsibilities, on the other hand, have increased since 1983 in all the major industries. The largest increases occurred in the generally female-dominated service-producing industries. Average annual days missed by full-time workers jumped by two days in finance, insurance and real estate and in services. Trade, public administration, and transportation, communication and other utilities also experienced increases of a day or more. In the goods-producing industries, very



Chart

**Time lost because of personal or family responsibilities has increased.**

Source: Labour Force Survey

\* Agriculture, fishing and trapping, logging and forestry, and mining

little change occurred in construction or other primary industries between 1983 and 1993, but manufacturing workers lost almost a full day more because of personal or family responsibilities.

### Industry absence rate variations persist

The major industries still differ not only in the proportion of workers who report a personal absence during a typical week, but also in the reasons for these absences. The two most important factors in these industry differences are the physical demands of the job and the sex composition of the workforce (Akyeampong, 1988 and 1992).<sup>3</sup> Generally, the more physically demanding and/or hazardous the job, the higher

the illness or disability absence rate (Haggard-Guénette, 1988 and 1992). As well, the higher the proportion of women in an industry, the higher the absence rate because of personal or family responsibilities.

In 1993, higher-than-average (over 4%) illness or disability incidences were reported each week in manufacturing, in transportation, communication and other utilities, and in public administration. Employees in finance, insurance and real estate recorded the lowest incidence (2.9%). Translated into total days missed, workers in the more hazardous manufacturing and transportation, communication and other utilities industries lost the most time (7.3 days), followed by those in the highly unionized pub-

lic administration (7.1 days). Employees in finance, insurance and real estate missed the fewest days (4.1).

Personal or family responsibilities accounted for higher-than-average absence rates (between 2% and 3%) among workers in several industries with relatively high concentrations of women: finance, insurance and real estate; services; and public administration. By contrast, rates were lower than average (below 2%) in the male-dominated goods-producing industries. Again, these differences were mirrored in days lost per worker. In 1993, close to five days were lost by full-time workers in finance, insurance and real estate, and by those in services, compared with only one day in construction.

The weekly absence rate for both personal reasons combined ranged from around 4% in agriculture and construction to over 6% in services and in public administration. The estimated time lost during the year was 5.2 days in agriculture, 6.6 days in construction, 10.5 days in services, and 10.3 days in public administration.

### Larger variations at the detailed industry level

At a more detailed industry level, differences in absence rates were often more striking. For example, in 1993 days lost for illness or disability in durable manufacturing industries averaged 7.8, a full day more than in non-durable manufacturing. On the other hand, employees in durable manufacturing lost less time for personal or family responsibilities than did their counterparts in non-durable manufacturing: 1.8 days versus 2.7 days. Average days missed because of illness or disability in both wholesale and retail trade were similar, at around 4.7 days, yet time lost for personal or family responsibilities in the slightly female-dominated retail trade exceeded that in wholesale trade: 3.1 days versus 1.9 days.

Workers in health and social services lost almost twice as much time as their counterparts in education, whether for illness or disability (9.4 days versus 5.5 days) or for personal or family responsibilities (6.6 days versus 3.8 days). Their time loss for illness or disability can perhaps be attributed to the peculiarities of their work arrangements (such as extended hours and shift work) and to their greater exposure to disease. Their high absence rate for personal or family responsibilities reflects the predominance of women in those industries. Workers in banks and other financial institutions (also heavily female-dominated) had the second high-

est absence rate for personal or family demands: 6.1 days in 1993.

In public administration overall, time lost because of illness or disability was roughly 7 days per full-time worker in 1993. Federal workers lost more time for personal or family responsibilities (4.5 days) than did their counterparts in provincial (3.0) and local (2.1) governments.

A statistical publication entitled *Work absence rates*, containing rates by (detailed) industry, occupation, sex, age and province from 1977 to 1994, will be on sale soon. See *What's new?* for more details.

### Discussion

Absences from work remain a challenge for Canadian employers. While the reductions in absences because of illness or disability are encouraging, further research using sophisticated methods might establish how much of this has resulted from shifts in the proportions of workers employed in specific industries and how much is related to other factors, such as improved safety and health measures and programs. For example, workers in non-durable manufacturing industries had lower absence rates than those in durable manufacturing firms, so a shift from durable to non-durable manufacturing employment would result in lower absence rates for manufacturing as a whole even if the rates in specific industries did not change. However, almost all major and specific industries have recorded a decline in illness or disability absence rates, suggesting that both employment shifts and other factors have contributed to the overall decline.

For absences due to personal or family responsibilities, a clearer interpretation of the trends de-

pends on being able to break that broad category into finer components such as maternity and paternity leave, child and elder care, and other personal or family obligations (unpaid household work, for example). Since the LFS currently does not make these distinctions, one has to turn to the limited data from other sources.

An initial examination of some of these sources<sup>4</sup> suggests that the removal of maternity leave from the personal or family responsibility category would reduce but not completely eliminate the male-female absence rate differentials. Also, the availability and use of paternity leave are not widespread, and hence omitting it would hardly change the overall rate for men. General Social Survey data clearly demonstrate that mothers continue to be burdened with most of unpaid domestic work even when both parents are employed full-time, implying that women face greater challenges in balancing work and family than do men. Not surprisingly, women tend to lose more time from work than men because of personal or family responsibilities. Consequently, absence rates for this reason tend to be higher in industries with higher proportions of female employees. □

### Notes

1 The redesigned LFS questionnaire, scheduled for implementation in 1997, will break personal or family responsibilities into sub-categories (for example, care of own children, care of elderly family members, maternity leave). The new categories will greatly enhance the analytical usefulness of the LFS data for estimating absence rates.

2 In addition to the uneven distribution of family chores among men and women, the inclusion of maternity leave in the personal or family responsibilities category further raises women's absence rates. Removal of maternity leave would reduce the male-female absence rate differentials. According to the Absence from



Work Survey (AWS), a supplement to the February LFS, an average of approximately 210,000 female workers took maternity leave lasting two consecutive weeks or more each year from 1983 to 1992. Thus, the proportion of women using this leave was not overwhelming (4%), and some of them may have left their jobs altogether. Furthermore, the AWS shows a maternity leave growth rate much smaller than the increase in time lost by women for personal or family responsibilities. Even in an analysis limited to short-term (part-week) absences – theoretically eliminating most, if not all, maternity leave – women still lost about twice as much time as men for personal or family responsibilities.

3 Other factors contributing to industry absence rates are the extent of unionization and the age composition of the workforce. Generally, the higher the proportion of union members, the higher the sick, personal or family-related leave entitlements and, possibly, use. Similarly,

the older the workforce, the higher the illness or disability absence rates. Worker boredom (with repetitive work, for example), job stress and employer-employee relations may be additional factors in work absences. Indeed, some respondents may give illness, disability, personal or family responsibility as the reason for absence, when the real cause may be boredom or job stress.

4 For example, data from the AWS (note 2), as well as administrative data from the Unemployment Insurance program itself.

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# Canada's newest workers

Tina Chui and Mary Sue Devereaux

New workers are not all young people emerging from the education system to make their way into the job market – a substantial number are immigrants, new not only to the workforce, but also to Canada.

Immigration is a major source of new workers. In 1991, Canada's workforce included about 366,000 people aged 15 and over who had immigrated during the 1986 to 1991 period.<sup>1</sup> They brought a range of skills and experience that enabled them to find employment in a variety of occupations. As well, they reflected the shift in immigrant origins toward Asia, the Caribbean, and Central and South America, which began in the 1970s.

This article profiles Canada's "newest" workers: people who entered the country from 1986 to 1991, and who at the time of the 1991 Census were employed (see *Data source and definitions*). It compares their characteristics with those of Canadian-born workers.<sup>2</sup>

## Over one-quarter of the increase in employment

Recent immigrants represented 28% of the increase from 1986 to 1991 in the number of people employed in Canada. However, their impact on different age groups varied. Fully 49% of the increase in the number of 25 to 34 year-old workers was attributable to recent immigrants. Their contribution to growth in the number of older workers was substantially less –

## Data source and definitions

The data in this article are from the 1991 Census and refer to the population aged 15 and over, excluding residents of institutions.

The **immigrant** population consists of people who are, or have been, landed immigrants. Landed immigrants have been granted the right to live in Canada permanently. Non-permanent residents – that is, refugee claimants and persons holding student or employment authorizations or Minister's permits – are not included in the immigrant population.

**Workers** (the employed) include all persons working for wages or salaries, working in their own busi-

ness, farm or profession, or working without pay in a family farm or business during the reference week (the week before Census day, June 4, 1991).

The **employment rate**, or the employment/population ratio, is the number of employed persons in a particular group (age, sex, immigrant status, etc.) expressed as a percentage of the population in that group.

**Full-time or part-time** employment is determined on the basis of the number of hours worked in the reference week. Persons who worked 30 or more hours were full-time workers; those who worked less than 30 hours were part-time workers.

15% at ages 35 to 44, 10% at ages 45 to 64, and 7% at age 65 and over.<sup>3</sup>

Because recent immigrants are less likely than people born in Canada to be employed (see *Un-*

*employment*), they contribute less to employment growth than to population increase. While recent immigrants accounted for 28% of the increase in the number employed from 1986 to 1991, they

## Unemployment

The **unemployed** include mainly persons who, during the week before Census Day (June 4, 1991) were without work, had actively looked for work in the past four weeks, and were available for work in the reference week. Together, employed and unemployed persons constitute the **labour force**. The **unemployment rate** for a particular group (age, sex, immigrant status, etc.) is the number of unemployed in that group expressed as a percentage of the labour force for that group.

In June 1991, the unemployment rate of recent immigrants was 17.7%, compared with 10.1% for Canadian-born adults. Among

men, the rates were 17.1% for recent immigrants and 10.2% for the Canadian-born. The corresponding rates for women were 18.4% and 10.0%.

The discrepancy in unemployment rates held at all ages. For example, the rate among recent immigrants aged 25 to 34 was 16.9%, compared with 10.6% for their Canadian-born contemporaries. At ages 35 to 44, the figures were 15.9% and 8.0%, respectively. And while unemployment among the Canadian-born tended to decline at older ages, this was not the case for recent immigrants. The rate was 20.4% for recent immigrants aged 45 to 64, two-and-a-half times the figure for the Canadian-born (7.6%).

*Tina Chui is with the Housing, Family and Social Statistics Division. She can be reached at (613) 951-8646. Mary Sue Devereaux is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-3312.*



were responsible for 39% of the increase in the population aged 15 and over.

### Entering the workforce

In 1991, the employment rate of the 652,000 people aged 15 and over who arrived after 1985 was 56%.<sup>4</sup> The comparable figure for the Canadian-born was 62%.<sup>5</sup> This disparity held among men and women and prevailed at almost every age<sup>6</sup> (Table 1).

Because people are most likely to immigrate when they are young adults, the age structure of the recent immigrant workforce is younger than that of the Canadian-born (Chart A). In 1991, 42% of recent immigrant workers were aged 25 to 34, compared with 30% of the Canadian-born. The share of 35 to 44 year-olds was also slightly higher among the immigrant group. Conversely, relatively few recent immigrant workers were older. For instance, the proportion aged 45 to 64 was half the figure for the Canadian-born.<sup>7</sup>

The proportions of women in the recent immigrant and Canadian-born workforces are virtually the same. In 1991, women accounted for 44% of recent immigrant workers and 45% of the Canadian-born. And regardless of age, women's shares of the two workforces were almost identical.

### "Polarized" educational attainment

The educational attainment of recent immigrant workers tends to be somewhat "polarized." That is, while a higher proportion of them are university graduates, the proportion with relatively little formal education also exceeds that of the Canadian-born. In 1991, 22% of recent immigrant workers had university degrees, compared with 14% of Canadian-born workers. At the same time, 9% of the immigrant group had less than Grade 9 versus 6% of Canadian-born workers.

Table 1

### Employment rates\* of recent immigrants and the Canadian-born population

	Both sexes		Men		Women	
	Recent immigrants**	Canadian-born	Recent immigrants**	Canadian-born	Recent immigrants**	Canadian-born
	%					
<b>Total</b>	<b>56</b>	<b>62</b>	<b>64</b>	<b>69</b>	<b>49</b>	<b>55</b>
<b>Age</b>						
15-24 years	44	57	46	58	41	56
25-34 years	66	78	74	84	59	71
35-44 years	68	80	76	87	60	73
45-64 years	48	62	60	73	37	52
65 years and over	10	9	15	14	6	5
<b>Education</b>						
Less than Grade 9	38	28	51	39	29	18
Secondary (with or without completion)	48	56	55	65	42	48
Some postsecondary	61	72	65	78	57	67
Trade certificate or diploma	64	71	70	74	56	63
Non-university certificate or diploma	69	77	75	83	64	71
University degree	70	83	75	87	63	80

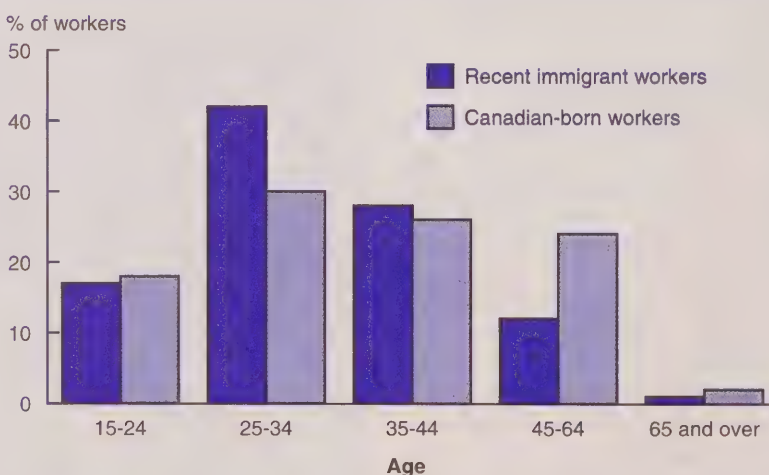
Source: Census of Canada, 1991

\* Employment/population ratio

\*\* People who immigrated to Canada between January 1986 and May 1991

Chart A

### Recent immigrant workers\* tend to be young adults.



Source: Census of Canada, 1991

\* People who immigrated to Canada between January 1986 and May 1991 and who were employed during the week before June 4, 1991

This overall polarization reflects the characteristics of 25 to 44 year-olds who make up such a large share of recent immigrant workers. At ages 25 to 44, 28% of recent male immigrant workers had university degrees, compared with 17% of the Canadian-born. For female workers, the corresponding figures were 24% and 17%.

At the other end of the education continuum, 7% of recent male immigrant workers aged 25 to 44 had less than Grade 9 versus 3% of the Canadian-born. For women, the proportions were 7% and 2%, respectively.

Educational attainment generally increases the likelihood of employment: in 1991, employment rates were highest among people with postsecondary credentials and lowest among those with less than Grade 9. Even so, recent immigrants with postsecondary education were less likely than the Canadian-born to be employed. The opposite was the case for those with relatively little formal education: 38% of recent immigrants with less than Grade 9 were working in 1991, compared with 28% of the Canadian-born.

### Employment rates vary by origin

European countries used to be the leading source of Canada's immigrants, but beginning in the 1970s, the picture changed. Asia, Central and South America, the Caribbean, and Africa now account for the majority of immigrants.

This shift in immigrants' origins is reflected in the recent immigrant workforce (Chart B). Half of recent immigrant workers were from Asia: 18% from Eastern Asia, 14% from South East Asia, 10% from Southern Asia, and 7% from Western Asia and the Middle East. Together, Africa, Central and South America, and the Car-

ibbean and Bermuda made up another 22% (see *Geographic regions*). Nearly a quarter (24%) of recent immigrant workers were from European countries, with the largest number (10%) coming from Eastern Europe, and 5% from the United Kingdom. The United States was the birthplace of 3%.

The employment rates of recent immigrants vary with their place of birth (Table 2). In 1991, the highest rate (82%) was among men from Northern Europe, while rates for those from Western and Southern Europe, the United States, the United Kingdom, and Oceania also exceeded the average for the Canadian-born (69%). The men with the lowest rate – 55% – were from Western Asia and the Middle East.

The pattern was similar for women. Employment rates among those from Northern and Western Europe, South East Asia, the

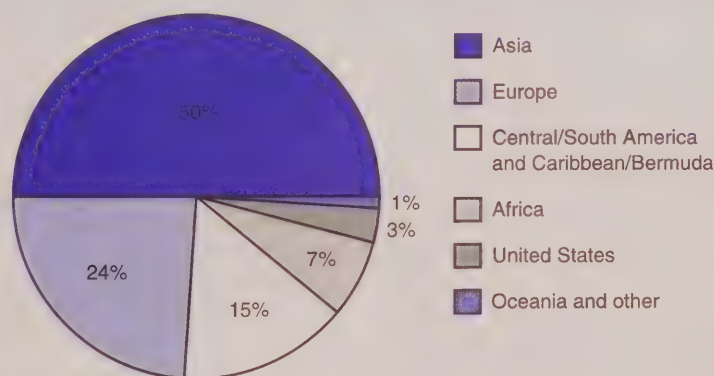
United States, and the United Kingdom surpassed the level for the Canadian-born (55%), while the rate of those from Western Asia and the Middle East was particularly low (32%).

### Most full time ... few self-employed

The majority of workers – recent immigrant or not – have full-time jobs. Among men, the proportions employed full time in 1991 were almost the same for recent immigrant and Canadian-born workers: 84% and 85%. By contrast, the proportion of female workers with full-time jobs was higher for recent immigrants: 72% versus 68%.

Recent immigrants are less likely than the Canadian-born to be self-employed. Among male workers, 10% of recent immigrants were self-employed in 1991 versus 13% of the Canadian-born. The corresponding figures for female workers were 5% and 6%.

Chart B  
Half of recent immigrant workers\* came from Asia.



Source: Census of Canada, 1991

\* People who immigrated to Canada between January 1986 and May 1991 and who were employed during the week before June 4, 1991



## Geographic regions

The Census place of birth question asked respondents to indicate their country of birth according to national boundaries existing on June 4, 1991. At that time, places such as the U.S.S.R. and Yugoslavia were nation-states. The countries included in the geographic regions are:

**CENTRAL AMERICA:** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

**CARIBBEAN AND BERMUDA:** Anguilla, Antigua, Aruba, Bahamas, Barbados, Bermuda, Cayman Islands, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, St. Christopher and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, Virgin Islands (British), and Virgin Islands (U.S.).

**SOUTH AMERICA:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela.

## EUROPE

**Western Europe:** Austria, Belgium, France, Germany, Liechten-

stein, Luxembourg, Monaco, Netherlands, and Switzerland.

**Eastern Europe:** Bulgaria, Czech and Slovak Federal Republic, Hungary, Poland, Romania, and the U.S.S.R.

**Northern Europe:** Republic of Ireland (Eire), Denmark, Finland, Iceland, Norway, Sweden, and United Kingdom.

**Southern Europe:** Albania, Andorra, Cyprus, Gibraltar, Greece, Italy, Malta, Portugal, San Marino, Spain, Vatican City State, and Yugoslavia.

## AFRICA

**Western Africa:** Benin, Burkina Faso, Cape Verde Islands, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, St. Helena and Ascension, Senegal, Sierra Leone, and Togo.

**Eastern Africa:** Burundi, Comoros, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Republic of Djibouti, Réunion, Rwanda, Seychelles, Somali Democratic Republic, Tanzania, Uganda, Zambia, and Zimbabwe.

**Northern Africa:** Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, and Western Sahara.

**Central Africa:** Angola, Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, São Tomé and Príncipe, and Zaire.

**Southern Africa:** Botswana, Lesotho, Namibia, Republic of South Africa, and Swaziland.

## ASIA

**Western Asia and the Middle East:** Afghanistan, Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Republic of Yemen, Saudi Arabia, Syria, Turkey, and United Arab Emirates.

**Eastern Asia:** Hong Kong, Japan, Macao, Mongolia, North Korea, People's Democratic Republic of China, South Korea, and Taiwan.

**South East Asia:** Brunei, Indonesia, Kampuchea, Laos, Malaysia, Philippines, Singapore, Thailand, Union of Myanmar, and Viet Nam.

**Southern Asia:** Bangladesh, Bhutan, India, Nepal, Pakistan, Republic of Maldives, and Sri Lanka.

**OCEANIA:** American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam (U.S.), Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Papua New Guinea, Pitcairn Island, Republic of Belau, Solomon Islands, Tonga, Tuvalu, U.S. Pacific Trust Territories, Vanuatu, Wallis and Futuna, and Western Samoa.

## Jobs held by men

The occupational profile of recent immigrants differs from that of the Canadian-born. In 1991, recent male immigrant workers were more likely than those born in Canada to be in service, clerical, product fabricating, or processing/machining jobs, but less likely to be in managerial, sales, primary or construction occupations. The representation of both groups in professional<sup>8</sup> positions was about the same (Table 3).

Within particular occupation groups, the areas in which immigrants were employed differed as

well. For example, of those in services, food and beverage preparation accounted for close to half of recent immigrant men, compared with just over a quarter of those born in Canada (Table 4). On the other hand, 9% of the immigrant group, but 38% of the Canadian-born, worked in protective services.

Among professionals, 52% of recent immigrant men were in natural sciences, engineering or mathematics, versus 39% of the Canadian-born. By contrast, recent immigrants' representation in teaching and social sciences was relatively low.

Occupations also vary by place of birth. Male workers from the United States (52%), Western (44%) and Northern (40%) Europe, Eastern Asia (40%) and Africa (32%) were more likely than the Canadian-born (29%) to have managerial or professional occupations. About one-fifth of men from South East Asia, Central and South America, Eastern Asia, and Western Asia and the Middle East were in service occupations, approximately double the figure for the Canadian-born. Relatively large proportions of men from South East Asia (17%), Oceania

Table 2

**Employment rates\* of the Canadian-born population and recent immigrants by place of birth**

	Both sexes	Men	Women
		%	
Canadian-born	62	69	55
Total recent immigrants**	56	64	49
Northern Europe†	75	82	68
Western Europe	67	78	58
United Kingdom	65	76	56
United States	63	73	56
Southern Europe	62	72	51
Oceania/other	62	73	53
South East Asia	60	63	58
Eastern Europe	57	64	50
Africa	57	64	48
Caribbean/Bermuda	56	60	54
Southern Asia	54	65	42
Central/South America	53	62	45
Eastern Asia	53	61	46
Western Asia/Middle East	46	55	32

Source: Census of Canada, 1991

\* Employment/population ratio

\*\* People who immigrated to Canada between January 1986 and May 1991

† Excluding United Kingdom

(15%), Eastern Europe (15%), Central (14%) and South (15%) America, and the Caribbean (15%) worked in product fabricating.

While few recent immigrants were in primary occupations (2%), the exceptions were men from Western Europe (12%) and Central America (7%). Construction jobs, accounting for 8% of all recent male immigrant workers, were held by more than a third (35%) of those from Southern Europe.

Relatively high proportions of men from the Caribbean (14%), Africa (14%) and Southern Asia (12%) were in clerical positions. Sales jobs, generally uncommon among recent immigrants, were held by at least 12% of male workers from Africa, Eastern Asia, and Western Asia and the Middle East.

**Jobs held by women**

As was the case for men, the occupational distribution of recent immigrant women varied from that of the Canadian-born. While clerical jobs ranked first for both groups, 27% of recent immigrants held such positions, compared with 33% of the Canadian-born.

Recent female immigrants were also less likely than Canadian-born women to work in managerial or professional occupations. For both groups, the leading professional occupations were in medicine and health. However, recent immigrant professionals were more likely than those born in Canada to be in natural sciences, engineering and mathematics, and less likely to be teachers.

The proportion of recent female immigrant workers in services surpassed the figure for the Canadian-born: 23% versus 15%. Within the services category, food and beverage preparation accounted for about a third of recent immigrants, but almost half of Canadian-born workers. Personal

Table 3

**Occupations of recent immigrant and Canadian-born workers**

	Men		Women	
	Recent immigrants*	Canadian-born	Recent immigrants*	Canadian-born
<b>Total employed ('000)</b>	<b>203</b>	<b>5,751</b>	<b>163</b>	<b>4,750</b>
	%			
Managerial/administrative	11	14	7	11
Professional	15	14	17	23
Clerical	9	7	27	33
Sales	8	10	8	10
Service	17	10	23	15
Primary	2	7	1	2
Processing/machining	8	6	3	2
Product fabricating	11	8	9	2
Construction	8	10	-	-
Other**	10	13	5	3

Source: Census of Canada, 1991

Note: Because of rounding, percentages may not add to 100%.

\* People who immigrated to Canada between January 1986 and May 1991 and who were employed during the week before June 4, 1991

\*\* Includes transportation and equipment operating, material handling, other crafts and equipment operating, and occupations not classified.



Table 4  
Recent immigrant and Canadian-born workers in service and professional occupations

	Men		Women	
	Recent immigrants*	Canadian-born	Recent immigrants*	Canadian-born
<b>In service occupations ('000)</b>	<b>34</b>	<b>565</b>	<b>37</b>	<b>718</b>
	%			
Proportion of all workers	17	10	23	15
All service workers	100	100	100	100
Protective services	9	38	1	6
Food and beverage preparation	47	27	32	46
Lodging and accommodation	3	2	6	4
Personal services	3	4	31	27
Apparel and furnishings	3	2	4	2
Other	34	28	25	15
<b>In professional occupations ('000)</b>	<b>31</b>	<b>814</b>	<b>27</b>	<b>1,101</b>
	%			
Proportion of all workers	15	14	17	23
All professional workers	100	100	100	100
Natural sciences, engineering and mathematics	52	39	15	7
Social sciences	6	12	11	14
Religion	3	2	1	1
Teaching	14	21	19	30
Medicine and health	15	13	45	41
Artistic, literary and recreational	10	12	9	7

Source: Census of Canada, 1991

Note: Because of rounding, percentages may not add to 100%.

\* People who immigrated to Canada between January 1986 and May 1991 and who were employed during the week before June 4, 1991

services represented 31% of the recent immigrant group and 27% of those born in Canada.

Employment in product fabricating was also more common for recent immigrant than Canadian-born workers: 9% compared with 2%.

As was true for their male counterparts, women's occupations varied with their birthplace. Managerial or professional positions were held by 49% of women from the United States and almost 40% of those from Northern and Western Europe, well above the figure for the Canadian-born (34%).

Clerical jobs accounted for 39% of female workers from Africa and 35% of those from Eastern Asia, compared with 33% of Canadian-born women. Around a third of women from Southern and Eastern Europe, Central America, South East Asia, and Oceania were in service occupations, about double the proportion for the Canadian-born. The highest proportions of recent immigrant women in product fabricating were from Southern Europe (17%) and Central and South America (14%), Southern Asia (14%), and South East Asia (12%).

## Summary

The "newest" workers reflect the shift of immigrants' origins away from European countries toward Asia, the Caribbean, and Central and South America. But given the diversity of recent immigrants' backgrounds, it is all but impossible to generalize about their labour market experiences. For example, a relatively large proportion of them have university degrees, but at the same time, they are more likely than the Canadian-born to have less than Grade 9. Recent immigrants also hold a wide range of jobs – many find employment in professional or managerial occupations, while others work in services or product fabricating.

Employment rates of recent immigrants tend to be lower than those of people born in Canada. However, chances of finding a job shortly after arriving vary with the immigrant's age, sex, education, and birthplace. □

The authors wish to thank Viviane Renaud and Jane Badets of the Housing, Family and Social Statistics Division of Statistics Canada and Claude Langlois of Citizenship and Immigration Canada for their valuable comments and suggestions in reviewing this article.

## Notes

1 Immigrants who arrived in 1991 would have come in the first five months of the year, as the Census was conducted on June 4.

2 The Canadian-born are Canadian citizens by birth. Most were born in Canada, but a small number were born in other countries to Canadian parents.

3 From 1986 to 1991, the total number of 15 to 24 year-old workers actually decreased from 2.3 to 2.2 million, reflecting the decline in the size of this age group. However, the downturn in the

number of young workers was somewhat moderated by the addition of 61,000 recent immigrant workers aged 15 to 24.

4 In 1993, the employment rate for recent immigrants (those who immigrated in the previous five years) was 50% compared with 57% for the Canadian-born. This drop in employment rates for both recent immigrants and the Canadian-born was probably due to general economic and labour market conditions, but some variation may reflect survey sampling. The recent data are from the 1993 Survey of Consumer Finances, whereas the 1991 data are from the Census.

5 As time spent in the country lengthens, employment rates rise. By 1991, the rate for immigrants who arrived in the 1981 to 1985 period was the same as that of the Canadian-born (62%).

6 Including people aged 65 and over in the calculations lowers the employment

rate of the total Canadian-born population. This is because the Canadian-born in this age range are numerous (more than 2 million), but very few of them are employed. Excluding this age group from the calculations widens the gap between the employment rates of recent immigrants and people born in Canada. The 1991 rate for recent immigrants aged 15 to 64 was 59% versus 69% for the Canadian-born.

7 Differences in the age distributions of recent immigrants and the Canadian-born affect the overall employment rates of the two groups. These differences can be summarized by using what is known as "age standardization." This involves assuming that recent immigrants have the same age distribution as the Canadian-born and then, using the employment rates already noted for each age group, recalculating the **overall** employment rate for recent immigrants. When the two age

distributions are made the same, the employment rate for recent immigrants falls to 51%.

8 Includes occupations in natural sciences, engineering and mathematics; social sciences and related fields; religion; teaching and related fields; medicine and health; and artistic, literary, recreational and related occupations.

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# Update on RRSP contributions

Hubert Frenken

The number of RRSP contributors and the amount invested in this tax-assisted retirement savings program are growing annually at dramatic rates. In 1993, 5.1 million Canadians claimed \$19.2 billion as RRSP deductions on their tax returns, an increase of 7% in contributors and 20% in contributions over the previous year. But despite these increases, taxfilers as a whole continue to use only a small fraction of the opportunities available to them.

To be eligible to contribute to RRSPs, individuals must have income that qualifies for RRSP purposes, and the amount that they can claim as a deduction on their tax returns is limited. Each year, Revenue Canada calculates an RRSP deduction limit (or room) for each eligible taxfiler. Any room not used in a given year can be carried forward to future years. In addition, some taxfilers may have certain types of income that qualify for transfer or rollover to RRSPs, over and above these limits.<sup>1</sup>

## Room to grow

In 1993, the total room available to eligible taxfilers (excluding the rollover opportunities) was almost \$98 billion. Of this, \$42 billion was new room, based on information provided on 1992 tax returns, and the remainder, unused room from the previous year. Only a small fraction of this total room was used, however.

*Hubert Frenken is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-7569.*

Considering that \$15.6 billion of the \$19.2 billion contributed in 1993 was subject to the standard deduction limits (the remainder being rollovers), taxfilers used only one-sixth of the total room available that year (Table). This compares with the nearly 30% consumed in 1991, when over \$12 billion was applied against the almost \$43 billion available then.<sup>2</sup>

Table  
1993 RRSP contributions

	\$ billions
<b>Total</b>	<b>19.2</b>
Subject to deduction limits	15.6
Rollovers of retiring allowances	2.8
Rollovers of pension payments	0.9

Source: RRSP room file

This under-use is generating cumulative deduction limits of dramatic proportions. Preliminary data show that the total room available in 1994 was more than \$126 billion. Unless growth in annual contributions mushrooms, total room will continue to accumulate, and the percentage used will continue to decline.

The major reason for this accumulation is non-participation of a large proportion of eligible taxfilers. In 1991, for example, less than one-third of taxfilers with RRSP room took advantage of this tax-assisted retirement savings opportunity. And many of those who did contribute used only part of their room.

Previous analyses have identified several reasons why so many do not participate, and have described those taxfilers most likely not to exercise this option (Frenken, 1990 and Frenken and Maser, 1993). It was not possible, however, to distinguish among contributors who claimed all, nearly all or just a fraction of their room. It was possible only to calculate the total room available to taxfilers as a whole, and the extent to which this room was used.

## New analytic tool

A recently created data base will permit a detailed analysis of how taxfilers used their RRSP opportunities from 1991 to 1993. It will be possible to categorize those who regularly exhausted all of their room; those who made contributions each year, but used up only part of it; those who contributed intermittently; and those who made no contribution at all, despite being eligible. It will also be possible to tabulate the number of taxfilers who rolled over retiring allowances and pension income, as well as the amounts involved.

The results of these analyses will be published in forthcoming issues of *Perspectives*. Data will soon be available on request. For detailed information at the Canada level, contact Karen Maser, Chief, Pensions Section, Labour Division at (613) 951-4033 and for more general information for small geographic areas, contact the Small Area and Administrative Data Division at (613) 951-9720. □

## ■ Notes

1 Since 1991, when new legislation on tax assistance for retirement savings came into effect, the maximum amount most taxfilers have been able to claim each year on their tax returns has depended on their previous year's income, the type of income and whether they participated in an employer-sponsored registered pension plan (RPP) or deferred profit sharing plan (DPSP). In 1993, this maximum amount was calculated as 18% of the taxfiler's 1992 earned income, up to a maximum of \$12,500, less any pension

adjustment, which was a calculated value of 1992 tax-assisted savings under an RPP or DPSP. Any unused 1991 and 1992 room was added to the new 1993 room to arrive at total 1993 room.

Taxfilers who received retiring allowances and/or pension benefits were able to transfer these (within certain limits) either to their own RRSPs or to those of their spouses. For further explanation of rollover opportunities and how RRSP room is calculated, see Frenken and Maser, 1993.

2 All of this was new room, since this was the implementation year of the new legislation.

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# Measuring productivity

Diane Galarneau and Jean-Pierre Maynard

In the past few years, attention has focused closely on the productivity of Canadian industries. This interest is the result of a major slowdown in the rate of productivity growth compared with that of the prosperous 1960s. Many analysts have tried to explain the causes of this slowdown and its effects on Canada's economy and production system, most often using labour productivity. This measure was discussed in a previous issue of *Perspectives* (Galarneau and Dumas, 1993).

However, the measure itself provides little information on the underlying causes and the effects of variations in productivity. Since 1989, Statistics Canada has published a new measure: multifactor, or total factor, productivity. This indicator and its derivatives make it easier to identify the factors of production that are the major or minor sources of growth. As well, multifactor productivity helps to identify the contribution of each factor to output.

This article compares the two measures and their trends in recent years. It also examines the relationship between multifactor productivity and employment.

## Definition and measurement

Productivity is the ratio of output to the factors of production. However, it is generally examined in terms of how it changes over time. If economic growth is measured

by the increase in the quantity of goods and services produced by a country in a given period, growth will come from two sources:

- increases in the factors of production (labour and capital<sup>1</sup>), and/or
- efficiency gains.

The notion of productivity growth comes into play with the second source and measures the improvement in the efficiency with which a business, industry or country produces goods and services.

Efficiency or productivity is difficult to quantify because no direct method exists for doing so. It is therefore derived by subtracting the contribution of the additional quantities of inputs used from the change in quantity produced, both of which are quantifiable. The result, productivity growth, is the residual portion of growth that cannot be accounted for by the additional quantities of inputs (see *Technical notes*).

At the national level, productivity growth is the difference between the increase in the quantity of goods and services produced by all businesses and the additional quantities of all inputs used. In the long term, this residual portion of growth represents the improvement in the efficiency of the entire production process. In that sense, increased productivity is a key element of economic growth because, without it, output would increase only with the addition of larger quantities of the factors of production.

## Two measures

Productivity can be considered in terms of the full range of inputs or only a single factor, such as labour

or capital. The former is total factor productivity, and the latter, a partial measure of productivity because it takes into account only one factor of production at a time.

By far the most widely used measure is labour productivity. This partial measure expresses the quantity of goods and services produced per unit of labour (hours worked). It was long the only measure of productivity because of problems associated with collecting and interpreting<sup>2</sup> the data on capital, which are essential in calculating total factor productivity. Statistics Canada's multifactor productivity measure, however, expresses output per unit of all inputs combined.

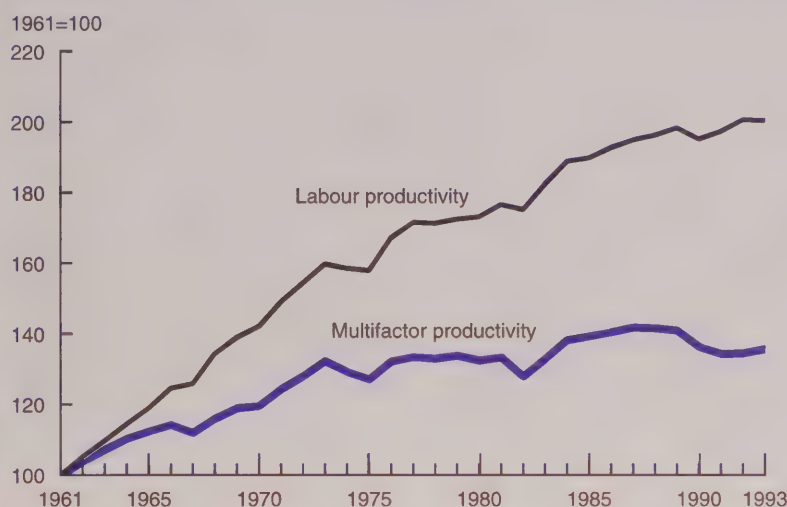
## Labour productivity increases more quickly than multifactor productivity

Labour productivity generally has a higher growth rate than multifactor productivity (Chart A). Labour productivity is the difference between the growth in output and the contribution of additional quantities of labour. Because it takes only labour into account, labour productivity represents the growth in output attributable to a relative change in the quantity of capital plus efficiency gains in the production process.<sup>3</sup> On the other hand, total factor productivity takes into account the contribution of all factors of production, so the residual portion of output growth represents only efficiency gains<sup>4</sup> (Figure).

Since the early 1960s, Canadian businesses have become far more automated, which has meant a steady increase in the relative quantity of capital. This largely explains why the labour productivity index<sup>5</sup> has grown more rap-

Diane Galarneau is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-4626. Jean-Pierre Maynard is with the Input-Output Division. He can be reached at (613) 951-3654.

Chart A  
Depending on the measure, productivity growth rates vary substantially.



Source: Input-Output Division

idly than the multifactor productivity index. In other words, the faster growth in labour productivity since 1960 has occurred in large measure because workers have been increasingly well equipped.

### Long-term trends

The trends in both the multifactor and the labour productivity index confirm that the productivity growth rate began to slow in 1975 (see *Why has productivity growth slowed?*). However, the severity of the decline depends on which indicator is used.

Since 1975, the Canadian economy has gone through two complete economic cycles: from 1975 to 1982 and from 1982 to 1991. The growth rate of the multifactor index improved during the second cycle, although it did not equal the performance of 1961 to 1975. The labour index, on the other hand, declined slightly since 1982 (Table 1).

The improvement in the performance of the multifactor productivity index between 1982 and 1991 results from a higher average annual increase in real output combined with a drop in the growth of capital stock. The small drop in the growth rate of the labour productivity index stems primarily from the relatively greater growth in hours worked compared with output.

### Sources of growth

One of the advantages of the multifactor productivity index is that it helps to identify the sources of output growth: productivity, capital and labour. For example, from 1961 to 1991, capital appears to have been the main component of growth in business output (as measured by the increase in real GDP). Between 1961 and 1975, the contributions of capital, labour and productivity were relatively strong and fairly

Figure  
Two productivity measures

Change in output(Q) = Change in labour(L) + Change in capital(K) + Change in technology(T)\*

or:  
 $\Delta Q = \Delta L + \Delta K + \Delta T$

therefore,  
LABOUR PRODUCTIVITY is

$$\Delta Q - \Delta L = \Delta K + \Delta T$$

and  
MULTIFACTOR PRODUCTIVITY is

$$\Delta Q - \Delta L - \Delta K = \Delta T$$

\* or productivity

Note: This is a simplified form of the detailed equation shown in Technical notes.



## Why has productivity growth slowed?

Since 1975, the growth rates of both multifactor and labour productivity have declined, a situation that it is not unique to Canada. The phenomenon has occurred in all industrialized nations and has been no worse here than elsewhere. Many researchers have attempted to pinpoint the causes, but after 20 years of research, the debate continues.

Of all the hypotheses put forward to explain this decline, two seem most plausible. According to the first, the oil shock in the 1970s and the restrictive policies that accompanied it were largely responsible for the decline in productivity. This explanation, however, is less popular today, as

productivity has not improved substantially despite lower prices for raw materials.

A second explanation is the "convergence" theory, which holds that countries tend to reach the same overall income and productivity levels in the long run. According to this theory, it is not the current slowdown that is unusual, but rather the rapid growth following World War II. During the "Dirty Thirties" and the war, many new technologies were developed, but their implementation into regular production had to wait until after the war. Because of the exceptional economic climate of the time, American firms were well positioned to draw on the backlog of new technology and hence experienced remarkable productivity improvements in the post-war years. Subsequently,

other industrialized countries adopted these new technologies, prompting their own productivity explosions and bringing their levels of productivity closer to that of the U.S. In fact, the lower a country's productivity level in 1960, the greater the increase achieved.

Once the new technologies had been completely adopted in the U.S., the rate of productivity growth slowed as technical advances were developed and implemented at a more "normal" pace and as the exceptional post-war conditions gradually ceased to exist. As other industrialized countries in turn implemented the new technologies, their productivity growth also slowed (Abramovitz, 1991; Fortin, 1994; Denny and Wilson, 1993).

similar, and output had its highest growth rate. However, between 1975 and 1982 and between 1982 and 1991, growth was dominated by capital (Chart B).

## Cyclical trends in the two productivity measures

Multifactor productivity is much more sensitive to economic cycles than is labour productivity. As a result, the multifactor index drops more markedly during recessions.

This sensitivity stems from different short-term characteristics of the two main factors: capital and labour. Capital is considered downwardly rigid because a business will rarely get rid of its capital stock during an economic slowdown, tending instead to decrease its use of capital. Also, since investment decisions are made well in advance, capital stock usually continues to increase even when production declines. Labour, however, is considered to be less rigid because it is possible, within certain limits, to reduce the hours worked.

When an economic slowdown occurs, businesses usually decrease the quantity they produce, primarily by reducing hours of work and the degree to which capital is used. Consequently, the multifactor productivity index tends to decline because less is being produced with a capital stock that is continuing to increase, at least in the short term. However, the downward adjustment in the number of hours is generally made more quickly, so labour productivity (as measured by output per hour worked) decreases less abruptly.

However, when the economy recovers, the multifactor productivity index rises rapidly because output increases more quickly than capital stock (machinery, materiel and plants). The relatively weak growth in capital stock occurs because investment decisions lag behind the economic cycle, so that even if output begins to recover, it will take longer for capital stock to follow suit. This time lag can sometimes lead to a more rapid increase in the multifactor index than in the labour index, as happened in 1984 and 1985.

Table 1

### Average\* rates of business sector growth from 1961 to 1991

	Multifactor productivity**	Labour productivity	Hours worked	Capital stock	Real output (GDP)
	%				
1961-1975	1.7	3.3	2.3	5.3	5.4
1975-1982	0.1	1.5	0.9	5.5	2.5
1982-1991	0.5	1.2	1.6	3.4	2.9

Source: Input-Output Division

\* Geometric average calculated from the trough of each business cycle

\*\* Based on value-added production

Chart B

**In every period since 1961, capital has contributed the most to business sector growth.**

Average growth rate (%)



Source: Input-Output Division

The multifactor productivity index increased from 1983 to 1987. The decreases observed between 1988 and 1991 resulted in part from under-use of capital. Capital stock grew at a high rate from 1986, whereas the degree of use of capital began to decline in 1989. Output decreased as capital stock kept increasing, which exerted downward pressure on the multifactor productivity index. The index increased slightly in 1992 and 1993, however, because of an upturn in output (Table 2).

Labour productivity rose from 1983 to 1989. The decline of 1.6% between 1989 and 1990 was caused mainly by a drop in output. The decrease was only temporary, however, because it was followed by three consecutive increases. These movements reflect the late adjustment by businesses to changes in aggregate demand.

### Is better productivity synonymous with employment growth?

Canadian firms have become more aware of the need to improve their productivity. On the

other hand, the country has an increasing problem with underemployment – people unemployed or working fewer hours than they would like (Noreau, 1994). But what is the relationship between productivity and employment?

Overall, between 1961 and 1991, changes in the multifactor productivity index paralleled those in employment. From 1961 to 1975, multifactor productivity and hours worked<sup>6</sup> climbed relatively quickly, whereas in the following two cycles (1975 to 1982 and 1982 to 1991) both multifactor productivity and hours worked rose more slowly (Chart B).

At the industry level, however, the relationship is not as clear over the entire period (1961 to 1991<sup>7</sup>). In some industries, such as agriculture, an increase in multifactor productivity coincided with a decrease in hours worked. In contrast, community, business and personal services and finance, insurance and real estate (other services) showed a decrease in productivity, yet posted the largest increase in number of hours worked (Table 3).<sup>8</sup>

Table 2  
Annual rates of business sector growth from 1982 to 1993

	Real output (GDP)	Multifactor productivity*	Labour productivity	Hours worked	Capital stock	Capital utilization rate**
	%					
1982	-5.6	-4.0	-0.8	-4.8	7.1	-10.2
1983	3.5	3.9	4.1	-0.6	1.6	3.0
1984	7.0	4.0	3.6	3.4	1.2	6.4
1985	5.6	0.8	0.5	5.0	2.3	4.5
1986	3.5	0.8	1.5	1.9	3.6	-1.0
1987	5.0	0.9	1.1	3.8	3.6	2.8
1988	4.9	-0.1	0.8	4.1	4.4	1.3
1989	2.4	-0.4	0.9	1.4	5.5	-2.0
1990	-1.5	-3.4	-1.6	0.1	5.3	-3.6
1991	-3.2	-1.4	1.1	-4.2	3.1	-3.7
1992	0.3	0.1	1.7	-1.4	3.8	-1.3
1993	3.2	0.9	0.9	2.3	1.8	1.8

Source: Input-Output Division

\* Based on value-added production

\*\* Based on total non-farm goods-producing industries



Table 3

**Average rates of growth from 1961 to 1991; proportion of hours worked and gross domestic product, 1991**

	Average* rates of growth 1961-1991			Proportion of hours worked (1991)	Proportion of GDP (1991)
	Multifactor productivity**	Hours worked	Capital stock		
	%				
<b>Goods sector</b>					
Agriculture	1.5	-1.9	-0.2	6.2	3.0
Other primary	-0.2	0.3	3.7	2.8	6.6
Manufacturing	0.6	0.7	3.7	19.8	24.2
Construction	0.3	1.4	4.6	8.7	8.3
Electricity, gas	1.2	3.0	4.8	1.2	4.4
<b>Service sector</b>					
Transportation	1.5	0.9	1.2	5.5	5.8
Communication	3.8	1.9	4.6	2.2	5.2
Wholesale trade	1.4	3.1	3.7	7.5	7.7
Retail trade	1.2	1.9	1.0	14.8	8.2
Other services †	-0.9	4.5	7.4	31.2	26.6

Source: Input-Output Division

\* Geometric average

\*\* Based on gross output

† Includes community, business and personal services, and finance, insurance and real estate

## What do productivity gains in an industry mean?

New jobs will not necessarily be created in an industry with efficiency gains. In fact, efficiency gains can have multiple effects depending on the prevailing conditions when the gains are realized.

The relationship between employment and productivity must be examined in a broader sense and over a longer period. A significant rise in productivity in a given sector eventually leads to reallocation of resources, as occurred in the transition to the industrial age. A large proportion of the population used to be engaged in agricultural activity, but today this industry accounts for a relatively small share of employment. As a result of improved productivity in agriculture, workers could shift to other industries, such as manufacturing.

Reallocation of resources is not painless, especially when the resources are workers. Human and non-human resources idled by the increased efficiency of production could remain unused for some time if aggregate demand is temporarily saturated or if they are unsuited to other industries.

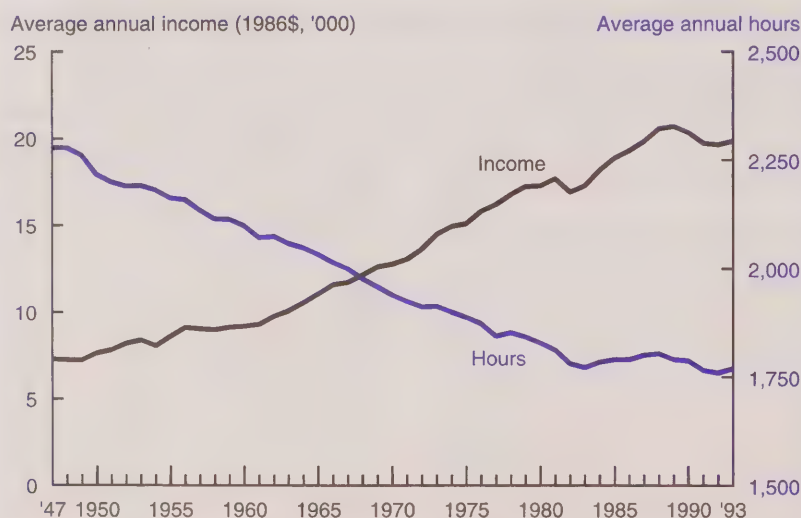
## Productivity and the standard of living

Despite temporary disruption, the long-term effect of improved productivity is always an increase in the standard of living. A general increase in productivity implies the same output at a lower cost (or higher output at the same cost). That translates into lower consumer prices and/or increased returns to the factors of production (including wages and salaries).

If technical advances served only to improve efficiency in producing the same outputs, employment would not increase. But growth in collective wealth stimu-

Chart C

**With increased productivity, per capita income has increased overall while hours of work have generally declined.**



Source: Input-Output Division

## Technical notes

### Calculation method

Productivity is derived as follows:

$$Q = F(K, L, T)$$

where

$$Q = \text{Output} \quad L = \text{Labour}$$

$$K = \text{Capital} \quad T = \text{Technological change (or productivity)}$$

Growth in output is represented by

$$q = \alpha k + \beta l + \tau$$

$$\tau = q - \alpha k - \beta l$$

where

$$q = \text{increase in output} \quad l = \text{Increase in labour}$$

$$k = \text{increase in capital} \quad \tau = \text{increase in technology}$$

$$\alpha, \beta = \text{shares of capital and labour in output}$$

The increase in multifactor productivity is calculated as the difference between the increase in output and the contribution of additional quantities of the factors of production.

Labour productivity is derived in a similar fashion. The growth in labour productivity ( $P_l$ ) is defined as:

$$P_l = q - l$$

The growth in labour productivity actually represents efficiency gains (growth in multifactor productivity) plus the contribution of increases in capital stock.

$$\text{Since } q = \alpha k + \beta l + \tau \text{ and } P_l = q - l$$

$$P_l = \alpha k + \beta l + \tau - l$$

$$P_l = \tau + \alpha k + (\beta - 1) l$$

$$\text{because } \alpha + \beta = 1 \text{ then } \beta - 1 = -\alpha$$

$$P_l = \tau + \alpha k + (-\alpha) l$$

$$P_l = \tau + \alpha (k - l)$$

where  $(k - l)$  is the change in capital relative to labour, that is, the ratio of capital to labour.

In the short or medium term, this method of measuring productivity can lead to interpretation errors. In fact, in the short term, an increase in measured productivity can reflect something other than changes in efficiency. It also reflects everything that cannot be quantified using current measurement techniques.

Other factors, whose contribution should be included with the inputs if measurement techniques allowed, will produce an upward bias in measured productivity. Changes in the degree of use of machinery and equipment or in economies of scale are two examples. Since collection methods are not perfect, measurement errors or omissions can also bias the productivity measure upward or downward and consequently over- or underestimate the improvement in efficiency.

### Capital

Productivity measures the quantity produced per unit of input. It is impossible to define a unit of capital, however, because it is not a homogeneous factor. The only data available are based on the real purchase values of machinery and equipment, which are written off over time to account for depreciation. Ideally, the measure used in calculating multifactor productivity should relate to the theoretical concept of the service provided by the capital, e.g., "machine-hours." Such a measure would be similar to that used for labour (hours worked).

### Converting quantities into dollars and prices

For a given business, it is usually possible to determine changes in the quantities of inputs used and goods and services produced. For a chair manufacturer, for example, a chair is a unit of production. At the national level, however, variations in quantities are more difficult to determine because of the many types of inputs used and goods and services produced, as well as the difficulty in finding a common unit of measurement. This is why inputs and outputs are expressed in dollars.

However, because of inflation, dollar values generally increase more quickly than quantities. Price deflation makes it possible to convert to measures in quantities and still retain a common unit of measurement.

### Exchange rate

Because Canada trades goods and services with other countries, Canadian businesses must cope with fluctuations in the exchange rate. That rate affects the price of goods and services traded between countries. If the Canadian dollar has a low value compared with the American dollar, Canadian goods and services sold in the United States will be more attractive because they cost less. If, in addition, productivity gains are passed on to the consumer in the form of a lower price for a particular good, this will give the product a further advantage on the American market. However, productivity gains could be offset by a high Canadian dollar because the price decrease in Canada (resulting from increased efficiency) would be nullified on the American market by the high exchange rate.

### Different measures of multifactor productivity

There are two types of multifactor productivity measure: industry measure and inter-industry measure. Statistics Canada publishes three industry measures (based on value added, gross output, and gross output net of intra-industry sales) and one inter-industry measure.

The measure based on value added is the most appropriate for analyzing the productivity of the business sector as a whole, and was used here for long-term trends and cyclical trends. Gross output was used for productivity by industry.

For further information, consult *Aggregate Productivity Measures*, Catalogue 15-204E.



lates new demands. As well, improvements in efficiency demand more sophisticated inputs. Meeting these new demands requires resources, which can be provided through the reallocation of resources made available by efficiency gains in other areas. In this way, productivity is linked to the standard of living and employment.

Productivity increases in primary industries and, later, in secondary industries have made substantial contributions to the growth of GDP and the overall wealth of the country. Among other things, this has translated into a major increase in real per capita income along with a decrease in the hours of work (Chart C). In addition, increased leisure, the possibility of postponing labour force entry, and the option of early retirement are all benefits of the increased collective wealth.

## Summary

Increased productivity is a key component of economic growth. Improvements in productivity represent technical progress in the broad sense of the term, without which national output would increase only with larger quantities of the factors of production (labour and capital).

Labour productivity, the most commonly used measure of productivity, is only a partial measure. Since 1989, a broader measure – multifactor productivity – has been available. By definition, this measure grows more slowly than labour productivity and is more sensitive to recessions.

Although overall, changes in employment and multifactor productivity followed the same pattern between 1961 and 1991, on an industry-by-industry level, increases in productivity sometimes coincided with decreases in hours

worked (or employment). This reflects in part the adjustments that must be made when production becomes more efficient. Hence the relationship between employment and productivity must be analyzed from a broader perspective and over a longer period. Under these conditions, overall increases in productivity lead to an improved standard of living and usually coincide with widespread employment growth. □

The authors wish to thank René Durand from Input-Output Division, Aldo Diaz from Public Institutions Division and René Morissette from Business and Labour Market Analysis Division for their valuable comments and suggestions in reviewing this article.

## Notes

1 Also included in the factors of production are intermediate goods and services such as energy and raw materials. However, for ease of presentation, this article deals with labour and capital only.

2 For further information, see *Technical notes*.

3 Changes in labour productivity (like changes in multifactor productivity) also result from economies of scale and changes in the degree of use of capital.

4 Because data are not sufficiently precise, the residual portion of growth still includes more than just efficiency gains. For further information, see *Technical notes*.

5 Productivity data are usually presented in index form.

6 Employment is represented in this study by the number of hours worked.

7 The data by industry are available only up to 1991.

8 Linking employment and productivity requires analytical techniques more sophisticated than the one used here. Table 3 serves only to place the discussion that follows in context.

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# Greying of the workforce

## Report on a symposium

As the twenty-first century approaches and baby boomers enter their later years, the aging of the workforce is receiving more attention. New policies and programs are necessary to respond to the needs of the pre-retirement years.

On September 30, 1994, *Perspectives* held a one-day symposium on the "Greying of the workforce." The symposium explored the myths and realities facing older workers and featured presentations by researchers, employers, workers, and representatives from labour unions and self-help groups.

The morning session examined the demographics of the greying of the workforce and the implications of these trends from a variety of viewpoints: social science, private sector, government, and individual. The afternoon session focused on actual and planned responses to an aging workforce. The speakers' comments are summarized below.

### Opening remarks

Noah Meltz, Principal, Woodworth College, University of Toronto and Chairperson, Advisory Committee on Labour Statistics

It is not clear whether the effects of the aging of the workforce will be positive or negative. Negative effects include "plateauing," whereby more workers compete for fewer senior positions and in turn block the advancement of younger colleagues; longer periods of unemployment for older workers who lose their jobs, because employers are reluctant to hire people they believe will be less healthy, less flexible, and less trainable than younger workers; and a rising dependency ratio as the proportion of people who do not work and must be supported grows.

Offsetting these effects may be the "Freedom 55" scenario, in which well-off workers willingly retire at younger ages. Meanwhile, older workers who remain on the job will give their employers a more experienced, stable and committed workforce with less turnover.

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For more details on the symposium, contact Hubert Frenken, Labour and Household Surveys Analysis Division at (613) 951-7569.

## Overviews

### New vision on aging – myths and realities

Susan Fletcher, Executive Director, Seniors Directorate, Health Canada

Canada's workforce is aging. Workers aged 45 and older will account for almost 33% of the workforce in the year 2000 and 40% in 2010, up from 27% in 1993. One of the major challenges will be eliminating outmoded attitudes about older workers' capabilities.

Age discrimination in the workplace is not uncommon. While mandatory retirement is probably the most obvious example, discrimination takes many forms:

- Compared with those under age 45, older workers are more likely to be laid off and tend to have longer periods of unemployment.
- Training lasting more than 25 hours is considerably less common among older workers.
- Older workers tend to have lower earnings.
- Hiring practices favour younger workers.

Age discrimination is fostered, or even endorsed, by attitudes with no scientific basis. Many studies refute the myths that older workers suffer diminished capacity, are ill more frequently, are less flexible and less trainable, and are not well-motivated. Research on aging shows enormous variation among individuals in the rate and extent of deterioration in the physical and cognitive capacities that affect work performance.

Ageism has been compounded in recent years by older workers' generally lower level of formal education compared with their younger colleagues, and by their concentration in sectors that have been hardest hit by economic restructuring. Many older workers are excluded from the new information economy because they lack the basic educational requirements.



Although discrimination against older workers is an institutionalized labour market strategy, especially in bad economic times, predicted labour shortages have led Germany and the United States to raise the standard age of retirement. The disadvantage of such policies is that they expose displaced older workers to longer periods of joblessness before they become eligible for old age pensions.

## Demographic outlook

*Jean Dumas, Chief, Current Demographic Analysis, Demography Division, Statistics Canada*

Projections suggest that between 1993 and 2015 the ratio of 15 to 64 year-olds in the total population will hover around 68%. However, the labour force itself will age as the ratio of younger to older adults declines. From 1993 to 2015, there will be a complete inversion, with the ratio of 15 to 24 year-olds to 55 to 64 year-olds dropping from 163.5% to 88.4%.

The youth population (15 to 24) will increase only slightly (5%), while older age groups, 45 to 54 and 55 to 64, will grow dramatically: 155% and 194%, respectively. The pace of growth of these older groups will eventually slacken as the baby boom advances beyond this age range.

Similar changes in the age distribution of the labour force will occur in several parts of the industrialized world, but nowhere will the increase in the population aged 45 and older be as great as in Canada. For example, patterns in the south and west of Europe will be similar to Canada's, but less pronounced. By contrast, in the northern European countries, the population aged 15 to 24 is expected to increase, while the other age groups decline slightly. And in Japan, the age distribution is expected to change very little.

## Implications

### Broad perspective

*Grant Schellenberg, Researcher, Canadian Council on Social Development*

The most striking aspect of the aging workforce is the rate at which men 55 and over are leaving it. Two theories are often used to explain this phenomenon. The "push" theory proposes that bad economic times push older workers out of their jobs, while the "pull" theory suggests that financial incentives offer older workers a means to leave the workforce. The most likely explanation is a combination of the two.

There is a great diversity in roads to retirement and in the ages at which people retire (from their early fifties to past sixty-five). Involuntary retire-

ment most often affects blue-collar workers and those with lower educational attainment, while voluntary retirement is more common among well-educated professionals who receive early pension benefits and buy-outs.

The next generation of retirees will be far larger than the next generation of labour force entrants, so it is possible that the economy may suffer a labour shortage. Such a shortage would give employers an incentive to keep their older workers. However, it is equally possible that the demand for labour will fall as technology takes over more tasks, or as demand is met by tapping other supplies of labour, such as offshore workers.

The impact of displaced older workers on the public purse could be substantial. For example, C/QPP disability pensions are now paid to twice as many 55 to 64 year-olds than was the case 10 years ago. As the workforce ages, the number of applicants for disability pensions is likely to continue to rise. This has happened in Europe, where disability pensions are increasingly used as income assistance for older displaced workers not yet eligible for old age pensions.

The mismatch between labour market conditions and public programs threatens to grow even larger as it becomes clear that old age and retirement are no longer synonymous. We must ask how society will support retirees who are not self-sufficient.

### Private sector

*Hélène David, Sociologist, Guest Researcher, Department of Sociology, University of Montreal*

Studies of the internal policies and practices of private firms show that there are currently no mechanisms for managing an aging workforce, nor are there any appropriate human resource management tools. By default, two admittedly inadequate measures are used: retirement and disability insurance plans. Numerous prescriptive studies, however, offer various methods of keeping an aging workforce employed.

Examples of strategies adopted by four Quebec manufacturers with higher-than-average proportions of older workers confirm that few firms have adapted management practices to the aging workforce. What stands out is the prevalence of early retirement schemes. In this respect, Canada is no different from most advanced countries. Governments have responded to pressure on employment by modifying income security plans and by implementing programs to encourage older workers to leave the labour force. But these measures carry some costs for the individual and society, as well as for the organization.

However, firms might consider a number of other options to deal with workers reaching the end of their careers: short-term withdrawal (with incentives to quit, or retire early), partial withdrawal (part-time work, job sharing), second careers (job rotation, re-employment), staying put (training that provides incentives to remain, flexible schedules, job restructuring, increased responsibilities, new roles, mentoring), and continuing growth (promotions, rotation to expand knowledge, incentives to stay).

### Personal experiences on labour force re-entry

*Connie Delahanty, job-seeker*

For an older job-seeker, ageism may manifest itself in discouraging remarks ("this job needs an energetic person"), minimum wages for high-level professional work, or young workers' discomfort at the prospect of having an older co-worker. Human resources managers may suggest to older job applicants that they are overqualified, that younger workers are more entitled to jobs, or that "McJobs" are more appropriate for someone "your age." Newly hired older workers may be advised not to complain about anything that would hint of age or infirmity – too many stairs, not enough heat, etc.

### Federal government programs

*Elayne van Snellenberg, Director General, Older Workers Adjustment Branch, Human Resources Development Canada*

Many of the jobs lost in the last recession have been those likely to be held by older workers. As well, employers tend to believe that retraining older workers is less cost-effective than upgrading the skills of younger workers. A considerable number of laid-off older workers face not retirement but welfare, with the concomitant loss of self-esteem and financial assets. This, in turn, leads to other social problems.

The federal department, Human Resources Development, has two types of program specifically for older displaced workers: the first tries to reintegrate them into the labour market through retraining and counselling; the second offers income assistance when reintegration has failed or is not appropriate.

In the future, as older workers play a more dominant role in the workforce, discrimination against them may be reversed. And if this does not occur naturally, governments may have to eliminate barriers to older workers. Society will also have to consider when long-term assistance is effective in helping older workers, and whether it should be tied to factors such as household income, length of employment, or community service.

### Summary

*Doug Norris, Director, Housing, Family and Social Statistics Division, Statistics Canada*

Summarizing the morning's presentations, Mr. Norris made the following observations:

- An aging workforce affects all the actors in society – governments, employers, individuals (who must make decisions about retirement, or about work outside paid employment, such as caregiving), and the volunteer sector.
- The context of the discussion changes with the times, as the economy is in recession or in recovery, as trade policies open up new markets, and as workers' individual circumstances change.
- Researchers need new information, especially on firms' human resources practices and policies. Longitudinal data are particularly important, as is putting labour market data in a broader social context.

### International experiences

*David Gray, Assistant Professor, Department of Economics, University of Ottawa*

Research from the United Kingdom, Canada, France and the United States indicates that even during good years, displaced older workers fare poorly in the labour market. And for most of them, industrial or regional mobility is not an option. The current system gives displaced workers an incentive to claim disability benefits. Workers must somehow be insured against the risk of layoff between ages 50 and 65. The public policy challenge is to bridge the gap between layoff and pension eligibility.

The United States has virtually no subsidized early retirement program. Workers displaced because of international trade have access to Trade Adjustment Assistance payments, which consist mostly of subsidized retraining. In the private sector, larger firms that do not face stiff competition may offer buy-outs and early retirement programs. Thus, these benefits are financed by lower profits and/or higher prices. Many displaced older workers lack such benefits, so they essentially pay the entire cost of a pre-retirement layoff. This creates marked inequality largely based on the sector of employment.

In Canada, too, adjustment costs are usually borne by the workers or their employers. However, the incidence of layoff with buy-out or employer-funded early retirement benefits may be higher because of the presence of Crown corporations.



In France, where the normal retirement age is 60, the situation is markedly different. Employees displaced from the quasi-public sector often receive buy-outs or early retirement benefits. These government-funded benefits were widely used throughout the 1980s, but the program is expensive.

Ultimately, workers will have to bear a large portion of the cost of special pension plans for displaced workers between 55 and 65. This implies higher premiums for younger workers, who must save for retirement, obtain life insurance and long-term disability insurance, and now, pre-retirement layoff insurance.

## Actual and planned responses

### Individual worker

*Karen Snyder, Owner, Bengka Corporation*

Laid-off older workers have a number of options: attempt to get a new job, retrain, live off investments, or become self-employed. The last option, self-employment, requires preparation, and may not be for everyone: 85% of new businesses fail within the first five years.

Self-employment means being one's own boss, but it also means taking responsibility for all decisions. The self-employed lack the structured environment and the structured time that go with a "9 to 5" job. Often this can result in a 7-day workweek with long hours.

There is more than one kind of self-employment. Perhaps best known is owning an independent business, but entrepreneurs need not always start from scratch. Other options include buying a business that is already in operation or buying a franchise. Network marketing – which depends heavily on word-of-mouth, involves one-on-one selling, and entails a much lower investment than buying an established business or franchise – may be particularly suitable for older workers. Self-employment is also possible through a group-owned business, or through a strategic alliance of related businesses; for instance, a desktop publishing firm and a printing company.

### Labour union

*Jo-Ann Hannah, National Representative, Pensions and Benefits Department, Canadian Auto Workers*

The problem of an aging workforce does not top the list of union priorities. The generally accepted norm is "30 and out" – that is, any worker with 30 years' service should be able to retire. Some companies, however, are trying to keep older workers for a few

more years. Falconbridge Ltd, for instance, offers an improved retirement package for those willing to accept "35 and out."

The Canadian Auto Workers has changed with the admission of members from the service sector and from industries such as mining and forestry, which may not offer pension plans or pay enough for workers to retire comfortably. Inevitably, these people will rely on government-sponsored pensions. Without an improvement to pension plans, these workers, particularly women, who may lack the means to retire, are candidates for late, not early, retirement. Unions, therefore, are fighting to maintain government income security programs.

There are several conditions under which unions would negotiate early retirement. They would do so to maintain jobs for younger workers or to deal with new technology, which is particularly troublesome for plant workers with relatively little education. As well, early retirement may be desirable in industries with difficult working conditions. "Just-in-time" production has increased the pace on production lines to the point where repetitive strain injuries and other problems are becoming more common.

Competition with countries like Mexico has also increased the pace of work. Although most Canadian unions have resisted pressure to speed up assembly lines, companies continue to push by offering incentives and bonus payments. If retirement is going to be postponed, healthier working conditions are needed. Workers require time off to regenerate. Thus, unions negotiate reduced time with no loss in pay.

Workers generally have not shared corporations' major productivity gains. Rather, most families now require two incomes. Perhaps we should look to the model in Europe where workers have more time off, vacations, and parental leave.

### Self-help group

*Canon Keith Calder, Co-ordinator, Operation Rainbow*

Few community resources are available to help unemployed professionals and executives, and those services that do exist are very expensive. Operation Rainbow – Resource and Information Network for Business Professionals Out of Work – was started in 1988 as a non-profit self-help effort to give such people an opportunity to meet, share information, and re-orient their style of job search. The program, costing \$50 per person, consists of six sessions and is offered three times a year to correspond with peak hiring periods (January-February, April-May, and October-November).

One of the most important functions of the program is to address the personal concerns of the unemployed. Job loss is a dramatic blow to self-confidence and creates a strong sense of isolation. Age is an important factor, as the people in this situation tend to be older and therefore encounter the attitude that "over-40" is "over the hill." Nonetheless, they are still in their prime working years and have continuing financial commitments.

Participants learn to build on their strengths, but not necessarily to look for the kind of job they previously held. Much of the program is planned by the participants themselves. They decide what job search skills they need, learn how to prepare for interviews, and share their successes and frustrations. They also become advocates for each other.

### Private sector

*Aurèle Quenneville, Director, Employee Benefits, Bell Canada*

The private sector faces numerous challenges including increased competition, changes in technology, cost constraints and shifting consumer demands. Bell Canada has responded to these pressures by downsizing and restructuring. Since 1982, 11,500 employees have accepted early retirement packages. Others have been retrained and redeployed. The resulting workforce is smaller, more flexible and more technically skilled.

Bell Canada's workforce tends to be more "middle-aged" than the overall labour force in Ontario and Quebec. This is the result of the combination of reduced hiring of young people, early retirement programs and high recruitment in the past. Consequently, although Bell Canada has offered early retirement packages to its employees, the reverse may be necessary in the future. As the baby boom generation reaches early retirement age, firms may have to provide incentives to entice workers to remain until they are 65 in order to avoid a sudden sharp loss of staff. At Bell Canada, early retirement packages are a temporary measure. The long-term plan is to improve pension programs to retain employees.

Not only will the early retirement trend likely reverse, but pension packages offered to employees may change. Cutbacks in public pensions and health care may put pressure on employers to extend coverage to these areas. In addition, employers must facilitate the evolving worker lifecycle. Specific options include recruitment programs for older workers starting a second career, internal retraining to ensure equal opportunity, and phasing-in of retirement through part-time work.

### Federal government

*Paul Mercier, Director, Research and Analysis, Policy Development Division, Treasury Board Secretariat*

The public sector has to deal with some of the same constraints and challenges that confront the private sector. As a result, the Treasury Board has sought to reduce and restructure the public service. Management prefers early retirement over other means of workforce reduction. Older workers are usually at the top of the pay ladder, so diminishing their numbers will lower salary costs. As well, vacancies at upper levels cause a ripple effect that facilitates worker mobility. Thus, although the pension plan for public servants allows retirement with no pension penalty at age 55 after 30 years' service, the need to downsize has meant that early retirement incentives have been offered.

At the moment, the separation rate in the public service is actually declining, reaching approximately 3% last year, somewhat below what is traditionally considered optimal (5% to 7%). Since the natural separation rate is too low to meet Treasury Board objectives, workforce adjustment programs have been implemented. Of employees remaining in the public service after age 55, 70% are eligible to receive a pension without penalty. Incentives have been offered to entice them to retire early, but surprisingly, some have not accepted generous compensation packages and buy-outs.

Like Bell Canada, the federal government has also seen a trend toward an age distribution more concentrated in the middle years than is the labour force at large. The result is a "retirement bubble," which will burst around the year 2005. This phenomenon is likely to be intensified by a tendency to hire "job ready" workers, rather than train current employees. Hence, "middle-aged" workers with relevant work experience are shutting inexperienced young adults out of federal service jobs. After the turn of the century, as the retirement bubble bursts, mobility and hiring within the public service will improve.

### Summary

*Shahid Alvi, Vice-President, Global Demographics*

Mr. Alvi summarized the afternoon's presentations with four observations. First, there is a spectrum of planned and actual responses to the greying of the workforce, ranging from self-help to organized corporate programs. These initiatives are currently isolated and unco-ordinated. Second, because a conflict exists between the need for productivity and the right to work, data must be placed within a social



and economic context. Third, more data are required – although firms, unions and governments have aggregate statistics, micro-level information on the outcomes of individuals is missing. Finally, a flexible approach is warranted. There is no single solution; solutions must be tailored to different circumstances.

## Overview and closing remarks

*John Coombs, Director General, Labour and Household Surveys Branch, Statistics Canada*

Aging-and-retirement policies and practices should seek a balance in the needs of the three actors – governments' need for fiscal restraint; employers' need to be competitive and to create career paths for younger employees; and individuals' need for well-being (for the young to have the expectation of a job and career, and for older persons to work as long as they are able, to retire without a major disruption in their lives, and/or to combine work and retirement). There seems to be no lack of models of how to meet these challenges.

Society has changed since the early 1970s. The presentations have revealed the need to eradicate discrimination, and to debunk myths about older workers. Today's speakers have also raised the question, "Will there be incentives or penalties for 'early' retirement in the future?"

Further, the distinction between voluntary and involuntary early retirement is becoming sharper. Bridges must be built to span the gap between invol-

untary retirement and the time when pensions begin to provide income. Workers themselves may have to pay more toward involuntary retirement before the age at which public pensions kick in. The experience in France demonstrates the problems of government's taking sole responsibility for income assistance during this period. Such a program must be based on insurance principles rather than being totally government-funded. Nonetheless, there will be a continued need for government social security for workers who lack the economic resources to retire – even in the face of government fiscal restraint.

Retraining workers in new technologies must occur on a larger scale to create a more flexible workforce. Statistics seem to suggest that hiring experienced entry-level workers to obtain "work ready" employees is preferred to training young recruits. At the same time, managers in the public service have encouraged older workers to retire, thereby creating job vacancies.

In summary, there are two main issues:

- the need to change the culture – to extinguish ageism and the myths surrounding age. On this issue, solutions are not solely a question of resources.
- the need for bridging assistance until displaced older workers reach the age at which pensions are normally paid, and the question of who should pay for this assistance.

# What's new?

## ■ JUST RELEASED

### ■ ***Caveat emptor: Revision of Labour Force Survey estimates***

Every five years, the population counts used in the weighting of the Labour Force Survey (LFS) are updated to match the most recent census. In January 1995, the LFS population counts were updated to reflect the 1991 Census results, and the entire time series was revised to ensure continuity. Usually, the revision is carried back less than 10 years, but this one goes back almost 20 years to 1976, to incorporate two changes: the net undercount experienced by the census; and non-permanent residents, covered for the first time in the 1991 Census. (Non-permanent residents include students on visas, temporary workers, people awaiting refugee status, and so on. They accounted for about 1% of the Canadian population in 1991.)

Conformity with the new population counts was not the only revision to the LFS this year. The sample frame was also updated to reflect the census. The new sample was introduced over six months, from October 1994 to March 1995. Updating the sample frame improves data quality by reducing sampling variance errors, even though the sample size remains the same. The new sample also uses the most recent census geography: it incorporates 1996 Census preliminary boundaries for census metropolitan areas – some of which have been expanded beyond the 1981 boundaries previously used by the LFS – and the 1991 boundaries for economic regions. Because of the change in geography used to select the sample, the time series estimates have been revised back to 1987 in order to be geographically consistent. The exception is British Columbia: because the new economic regions were radically different from the old ones, official estimates were not revised back to 1987.

Articles about the revisions to the Labour Force Survey were published in the October, November and December 1994 issues of *The Labour Force* (Catalogue 71-001). For more information, call Colleen Clark at (613) 951-4723; or fax (613) 951-2869. □

### ■ ***Persons with disabilities***

Almost half (48%) of working-age persons with disabilities were employed in 1991. Although this proportion was well below that of persons without disabilities (73%), their labour force situation has improved in recent years. The improvement is documented in *A Portrait of Persons with Disabilities* (Catalogue 89-542E), based on the 1991 Health and Activity Limitation Survey (HALS). The report discusses education, labour force participation, employment, unemployment and income. It also discusses barriers to employment.

The labour force activity of persons with disabilities still differs dramatically from that of persons without disabilities. They are far more likely to be unemployed or not in the labour force. Nevertheless, the chapter on labour force participation also shows that

- persons with disabilities accounted for 9% of all Canadians with jobs in 1991, up from 7% in 1986.
- between 1986 and 1991, their employment/population ratio rose about 8 percentage points (to 48%), considerably faster than the increase of 3 percentage points (from 70% to 73%) reported by people without disabilities.
- men with disabilities were more likely than their female counterparts to be employed: 56% compared with 41% in 1991.
- in 1991, 73% of male and 61% of female university graduates with disabilities had a job. However, among those with less than Grade 9, only 40% of men and 19% of women were employed.
- over 80% of employed persons with disabilities worked full-time hours (at least 30 hours per week); in fact, 22% of full-time workers with disabilities worked more than a 40-hour week.

Although these trends are encouraging, persons with disabilities still face many barriers, other than their condition, that prevent them from joining the workforce. Overall, 20% of people with disabilities were



not in the labour force in 1991 because they would lose some or all of their source of income if they were employed. Another 15% believed their present training was not adequate for finding work; 14% thought no suitable jobs were available; and 12% stood to lose some or all additional supports. As well, in most cases, the prevalence of these barriers increases with the severity of the disability.

*A Portrait of Persons with Disabilities* (Catalogue 89-542E) is available for \$40 from any Statistics Canada Reference Centre, or from Marketing Division, Sales and Service, Statistics Canada, Ottawa K1A 0T6; fax (613) 951-1584. Or call toll free 1 800 267-6677. □

### ■ **Trends in work absence over a generation**

*Work absence rates 1977 to 1994* (Catalogue 71-535M no. 7) presents data from the Labour Force Survey to document trends in absences from work over the last 18 years. Information is published on incidence of absence (proportion of the workforce absent during each week), the rate of inactivity (proportion of work hours lost due to absences), and annual average number of days lost per full-time worker. The reason for absence – illness or disability, and personal or family responsibilities – is also provided for each measure. The four series of data tables cover absence rates by sex for detailed industries, major occupations and age groups, as well as total absence rates for provinces. For an analysis of industry absence rates from 1983 to 1993, see “Missing work” in this issue.

*Work absence rates 1977 to 1994* (Catalogue 71-535M no. 7) will be available soon for \$40 from any Statistics Canada Reference Centre, or from Marketing Division, Sales and Service, Statistics Canada, Ottawa K1A 0T6; fax (613) 951-1584. Or call toll free 1 800 267-6677. □

### ■ **Longitudinal data on fee-for-service physicians**

Information about selected characteristics of physicians is available on the National Physician Data Base (NPDB). The longitudinal data, provided by the provinces and territories, currently cover the fiscal years 1989-90 to 1992-93.

The NPDB is a multi-year, multi-phase project managed by Health Canada that will soon be transferred to the Canadian Institute for Health Information. Data from Phase 1 cover the demographic characteristics and activity levels (total payments, total services and average payments) of fee-for-service physicians. Phase 2 will add data on clinical activities of physicians working for alternative methods of remuneration (for example, salary), and Phase 3 will provide data on physicians' non-clinical activities such as administration, teaching and research.

The following highlights from Phase 1 cover all physicians who received a fee-for-service payment in 1989-90. The full-time equivalent (FTE) measure used is based on billings, and has been calculated to control for differences in workload among physicians.

- There were almost 48,000 fee-for-service physicians in Canada in 1989-90, or about 39,600 full-time equivalent (FTE) physicians. Physicians aged 45 to 54 performed more services than any other age group.
- There were more male than female FTE physicians in all age groups. However, the under-45 age group had a higher proportion of women physicians than the older age groups. This is to be expected, since almost half of the female FTE physicians (47%) had graduated from medical school within the previous 10 years, compared with one-fifth (21%) of their male counterparts.
- Rural areas have substantially fewer FTE physicians per 100,000 population than urbanized areas (populations of 10,000 or more). General practitioners are more evenly distributed across communities than specialists, who tend to be concentrated in urban areas.
- Almost all FTE physicians who were recent graduates (graduated within the previous five years) had obtained their medical degrees from Canadian schools. Only 62% of men and 41% of women who graduated more than 20 years ago had attended Canadian medical schools.

For more information about the National Physician Data Base, contact the Health Information Division of Health Canada at (613) 957-3075. □

## ■ UPCOMING SURVEYS

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### ■ *Spring 1995: School Leavers Follow-up Survey*

Human Resources Development Canada has commissioned this follow-up to the 1991 School Leavers Survey. While the original survey focused on the risk factors associated with not completing high school, the follow-up is collecting information on school-to-work transitions of the respondents, now aged 22 to 24.

Data will be collected on their education and labour market activities since the end of high school. Of particular interest is an assessment of their skills, especially as they relate to the school-to-work transition. These skills include

- basic literacy and numeracy
- verbal and interpersonal communication
- critical thinking and problem-solving
- learning
- ability to use technology.

Because measuring such generic skills through surveys demands innovative methodologies, the survey designers are developing proxy measures of skill sets.

Results of the 1991 Survey of School Leavers were published in "Labour market outcomes for school leavers" (*Perspectives*, Winter 1993) and "What's

New?" (Summer 1992). For information about the School Leavers Follow-up Survey, contact Lynn Barr-Telford at (613) 951-1518; or fax (613) 951-9040. □

### ■ *January 1995 to December 1995: General Social Survey, Cycle 10 (Family)*

Over the course of the year, about 10,000 people will be interviewed for Cycle 10 of the General Social Survey on the family (GSS 10). The interview will focus on family relationships, and will include modules on

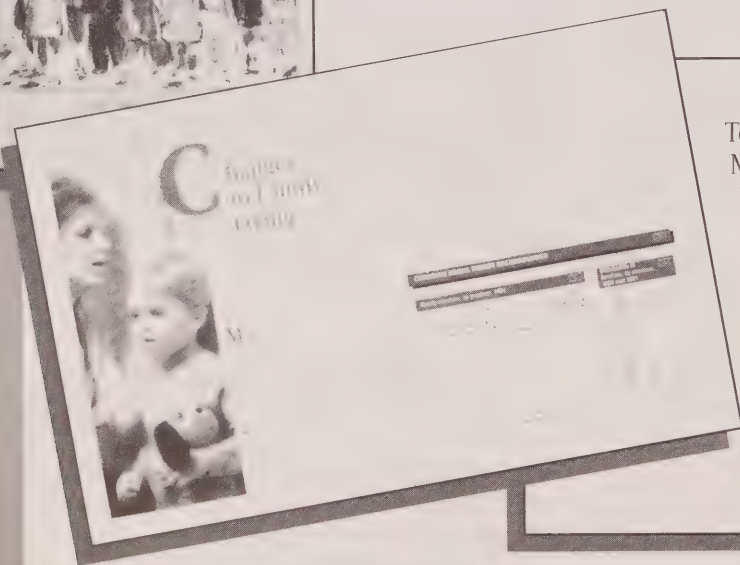
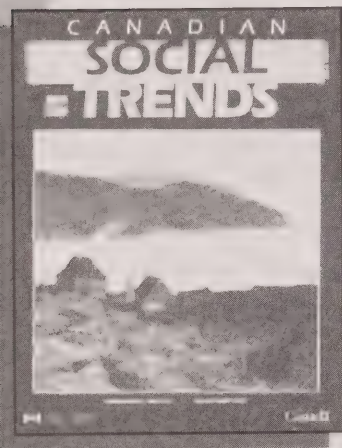
- paid and unpaid work, including hours spent doing that work
- paid work interruptions and reasons for such interruptions
- history of marriages and common-law relationships
- children and custody arrangements.

The GSS has been conducted annually since 1985. The survey program repeats every five years, collecting data on the following core topics: social support, time use, personal risk, work and education, and the family. GSS 10 completes the second round of core topics.

For a brief description of the General Social Survey program, see "Sources," *Perspectives*, Spring 1990. For more information about Cycle 10, call Dave Horlor at (613) 951-9298; or fax (613) 951-0387. □



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# Key labour and income facts

The following selection of labour and income indicators is drawn from 11 sources and includes published and unpublished annual data. These indicators appear in every issue.

The latest annual figures are always shown; as results become available, the indicators are updated so that every issue contains new data. An indicator updated or revised since the last issue is "flagged" with an asterisk.

## Data sources

The indicators are derived from the following sources:

- |           |  |
|-----------|--|
| 1-13 & 15 | <b>Labour Force Survey</b><br>Frequency: Monthly<br>Contact: Doug Drew (613) 951-4720                          |
| 14        | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211                |
| 16        | <b>Absence from Work Survey</b><br>Frequency: Annual<br>Contact: Nancy Brooks (613) 951-4589                   |
| 17        | <b>National Work Injuries Statistics Program</b><br>Frequency: Annual<br>Contact: Joanne Proulx (613) 951-4040 |
| 18        | <b>Help-wanted Index</b><br>Frequency: Monthly<br>Contact: André Picard (613) 951-4045                         |
| 19-20     | <b>Unemployment Insurance Statistics Program</b><br>Frequency: Monthly<br>Contact: André Picard (613) 951-4045 |
| 21-28     | <b>Survey of Employment, Payrolls and Hours</b><br>Frequency: Monthly<br>Contact: Cindy Ingalls (613) 951-4090 |

- |       |  |
|-------|--|
| 29-31 | <b>Major wage settlements, Bureau of Labour Information (Human Resources Development)</b><br>Frequency: Quarterly<br>Contact: Information (819) 997-3117                 |
| 32-34 | <b>Labour income (Revenue Canada, Taxation; Survey of Employment, Payrolls and Hours; and other surveys)</b><br>Frequency: Quarterly<br>Contact: Ed Bunko (613) 951-4048 |
| 35-45 | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211  |
| 46-52 | <b>Household Facilities and Equipment Survey</b><br>Frequency: Annual<br>Contact: Penny Barclay (613) 951-4634   |
| 53-54 | <b>Small area and administrative data</b><br>Frequency: Annual<br>Contact: Customer Services (613) 951-9720  |

Notes and definitions of certain indicators are given at the end of the table.

## Additional data

The table provides, at the most, two years of data for each indicator. A longer time series (generally 10 years) for this set of indicators can be obtained, on paper or diskette, at a cost of \$50. (A more extensive explanation of the indicators is also available.) This 10-year data set is updated quarterly. For information, contact Jeannine Usalcas at (613) 951-6889; fax (613) 951-4179.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Labour market</b>								
1	Labour force	'000	1992	13,797	236	64	416	331
			1993	13,946	234	65	419	332
	Change	%		1.1	-0.9	1.1	0.6	0.3
2	Participation rate	%	1992	65.5	53.6	65.8	59.9	59.0
			1993	65.2	52.8	65.3	59.8	59.0
3	Employed	'000	1992	12,240	188	53	361	289
			1993	12,383	186	53	357	291
	Change	%		1.2	-0.9	1.0	-1.1	0.6
4	Proportion of employed working part time	%	1992	16.8	13.5	16.4	17.5	15.6
			1993	17.3	14.2	17.2	17.8	16.0
5	Proportion of part-timers wanting full-time work	%	1992	32.5	62.1	43.4	45.5	45.9
			1993	35.5	63.8	43.5	47.7	50.4
6	Unemployed	'000	1992	1,556	48	11	55	42
			1993	1,562	47	12	61	42
	Change	%		0.4	-0.6	1.5	11.7	-1.6
7	Official unemployment rate	%	1992	11.3	20.2	17.7	13.1	12.8
			1993	11.2	20.2	17.7	14.6	12.6
<b>Alternative measures of unemployment</b>								
8	Unemployed 14 or more weeks as a proportion of the labour force	%	1992	5.5	10.2	7.3	6.0	5.4
			1993	5.6	10.7	7.8	7.0	5.4
9	Unemployment rate:							
	- of persons heading families with children under age 16	%	1992	9.7	19.0	17.4	10.9	11.5
			1993	9.5	19.1	17.9	12.5	11.4
	- excluding full-time students	%	1992	11.0	20.1	17.9	12.7	12.6
			1993	10.9	20.0	18.0	14.3	12.3
	- including full-time members of the Canadian Armed Forces	%	1992	11.2	20.1	17.6	12.8	12.6
			1993	11.1	20.1	17.7	14.2	12.4
	- of the full-time labour force	%	1992	13.6	23.6	21.4	16.6	16.0
			1993	13.9	24.0	21.6	18.3	16.1
	- of the part-time labour force	%	1992	14.1	21.7	12.0	16.7	15.6
			1993	14.4	21.5	13.0	18.0	15.7
	- including discouraged workers and others on the margins of the labour force	%	1992	12.1	24.4	18.7	14.1	14.8
			1993	12.0	24.4	18.9	15.6	14.2
10	Underutilization rate based on hours lost through unemployment and underemployment	%	1992	14.3	24.3	22.0	17.5	17.1
			1993	14.6	24.8	22.3	19.1	17.3
11	Proportion unemployed six months or longer	%	1992	28.1	29.3	--	23.9	22.2
			1993	30.8	33.0	--	26.8	23.8
<b>Other labour market indicators</b>								
12	Employment/population ratio for persons aged:							
	- 15 to 24 years	%	1992	53.5	32.4	49.4	48.0	46.9
			1993	52.1	30.5	51.3	46.7	46.5
	- 25 to 64 years	%	1992	70.0	53.7	67.1	64.5	63.5
			1993	70.1	53.4	66.0	63.3	63.8
	- 65 years and over	%	1992	6.4	3.1	7.2	3.6	4.0
			1993	6.2	2.3	6.2	4.0	3.7

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
3,385	5,286	535	480	1,370	1,693	..	..	1992	'000	1
3,404	5,362	540	479	1,384	1,728	..	..	1993		
0.6	1.4	0.9	-0.2	1.0	2.0	..	..		%	
62.5	67.3	66.0	66.6	71.9	66.3	..	..	1992	%	2
62.2	66.9	66.6	66.6	71.5	65.7	..	..	1993		
2,953	4,714	484	440	1,240	1,517	..	..	1992	'000	3
2,960	4,793	490	440	1,252	1,561	..	..	1993		
0.2	1.7	1.3	-	1.0	2.9	..	..		%	
15.1	17.3	19.4	18.4	16.4	18.0	..	..	1992	%	4
15.7	18.1	19.4	18.4	17.1	17.8	..	..	1993		
38.0	29.1	32.8	35.4	27.8	27.9	..	..	1992	%	5
41.9	32.0	34.3	38.2	31.7	30.0	..	..	1993		
432	572	51	39	130	176	..	..	1992	'000	6
444	569	50	38	132	167	..	..	1993		
2.9	-0.5	-2.8	-2.4	1.7	-5.0	..	..		%	
12.8	10.8	9.6	8.2	9.5	10.4	..	..	1992	%	7
13.1	10.6	9.2	8.0	9.6	9.7	..	..	1993		
6.8	5.4	4.0	3.4	3.8	4.5	..	..	1992	%	8
7.2	5.5	4.3	3.4	4.1	4.3	..	..	1993		
										9
10.6	9.1	8.1	7.3	8.5	9.1	..	..	1992	%	
10.3	8.9	7.6	7.0	9.0	8.0	..	..	1993		
12.6	10.3	9.2	8.0	9.3	10.3	..	..	1992	%	
12.8	10.2	8.8	7.8	9.2	9.5	..	..	1993		
12.7	10.8	9.5	8.2	9.4	10.4	..	..	1992	%	
13.0	10.6	9.2	8.0	9.5	9.6	..	..	1993		
15.3	12.8	12.4	11.4	11.3	12.8	..	..	1992	%	
15.8	13.1	12.2	11.3	11.7	12.0	..	..	1993		
15.3	14.8	12.9	9.6	13.1	11.9	..	..	1992	%	
16.8	14.0	12.3	10.9	14.5	12.5	..	..	1993		
14.2	11.3	10.2	8.8	9.9	10.7	..	..	1992	%	
14.6	11.0	9.9	8.5	9.9	10.1	..	..	1993		
15.8	13.6	13.1	12.1	12.1	13.3	..	..	1992	%	10
16.4	13.9	13.0	12.2	12.6	12.7	..	..	1993		
33.1	29.8	23.6	21.0	20.4	22.5	..	..	1992	%	11
34.2	33.3	26.9	23.2	24.4	24.2	..	..	1993		
										12
48.8	55.3	58.3	54.4	59.7	58.8	..	..	1992	%	
46.9	53.7	58.4	55.1	58.6	57.5	..	..	1993		
65.3	72.2	73.6	76.6	75.3	72.2	..	..	1992	%	
65.4	72.5	74.5	76.6	75.3	72.1	..	..	1993		
4.7	7.0	7.1	12.6	10.1	5.0	..	..	1992	%	
4.1	6.8	7.8	13.3	9.5	5.2	..	..	1993		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
13	Employment by major class of worker:							
	- employees	'000	1992 1993	10,372 10,399	162 159	43 44	314 306	253 253
	- self-employed	'000	1992 1993	1,807 1,912	26 27	10 10	46 51	35 36
14	Men working full-time, full-year	'000	1991 1992	5,126 5,091	68 65	18 19	143 132	115 118
	Women working full-time, full year	'000	1991 1992	3,419 3,423	45 48	13 13	93 96	79 82
15	Days lost per full-time worker per year through illness or for personal reasons	days	1992 1993	9.2 9.3	10.7 9.4	7.9 7.7	9.0 9.8	8.9 8.5
16	Proportion of paid workers absent two or more consecutive weeks because of illness or accident	%	1992 1993	5.6 5.8	4.1 4.8	4.0 4.6	5.4 6.1	6.0 5.5
17	Workers receiving Workers' Compensation for time-loss injuries	'000	1991 1992	521 456	9 8	2 2	13 12	12 10
	Change	%		-12.5	-17.3	-6.3	-4.3	-14.2
18	Help-wanted Index (1991=100)		1992 1993	86 87	88 82	96 117	87 88	82 89
<b>Unemployment insurance</b>								
19	Total beneficiaries	'000	1992 1993	1,388 1,292	81 71	16 16	65 63	67 65
	Change	%		-6.9	-13.1	0.8	-2.4	-2.1
20	Regular beneficiaries without reported earnings	'000	1992 1993	1,006 931	63 56	11 11	46 44	51 49
	Change	%		-7.5	-12.2	-0.3	-3.4	-4.4
<b>Earnings (including overtime) and hours</b>								
21	Average weekly earnings in current dollars	\$	1992 1993	549.80 559.24	510.65 526.86	444.70 453.74	491.10 495.80	494.39 503.30
	Change	%		1.7	3.2	2.0	1.0	1.8
22	Average weekly earnings in 1986 dollars	\$	1992 1993	429.20 428.87	418.22 424.54	350.43 350.92	391.31 390.39	395.51 397.55
	Change	%		-0.1	1.5	0.1	-0.2	0.5
23	Average weekly earnings of salaried employees in current dollars	\$	1992 1993	691.04 705.03	621.71 641.80	599.84 608.24	621.34 620.64	624.15 637.67
	Change	%		2.0	3.2	1.4	-0.1	2.2
24	Average weekly earnings of salaried employees in 1986 dollars	\$	1992 1993	539.45 540.67	509.18 517.16	472.69 470.41	495.09 488.69	499.32 503.69
	Change	%		0.2	1.6	-0.5	-1.3	0.9
25	Average weekly earnings of hourly paid employees in current dollars	\$	1992 1993	421.51 428.70	381.63 406.10	285.01 297.56	375.98 382.35	393.56 402.62
	Change	%		1.7	6.4	4.4	1.7	2.3
26	Average weekly earnings of hourly paid employees in 1986 dollars	\$	1992 1993	329.05 328.76	312.56 327.24	224.59 230.13	299.59 301.06	314.85 318.03
	Change	%		-0.1	4.7	2.5	0.5	1.0
27	Average weekly hours of hourly paid employees	hrs	1992 1993	30.5 30.6	33.5 33.9	30.4 30.7	31.7 31.7	33.1 33.4
28	Average weekly overtime hours of hourly paid employees	hrs	1992 1993	0.8 0.9	0.9 1.0	0.3 0.4	0.6 0.6	0.7 0.7

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
										13
2,545	4,068	399	328	1,007	1,253	..	..	1992	'000	
2,529	4,095	403	327	1,007	1,275	..	..	1993		
394	630	80	102	224	259	..	..	1992	'000	
415	674	83	104	232	279	..	..	1993		
1,264	1,981	194	188	534	621	..	..	1991	'000	14
1,237	1,999	199	187	510	624	..	..	1992		
819	1,388	122	114	331	415	..	..	1991	'000	
825	1,393	133	108	325	401	..	..	1992		
10.7	9.0	8.4	8.1	7.7	8.6	..	..	1992	days	15
10.4	9.1	9.7	8.6	7.9	9.3	..	..	1993		
5.9	5.2	7.8	3.8	5.9	5.8	..	..	1992	%	16
6.3	5.5	5.5	4.3	4.5	7.1	..	..	1993		
179	155	18	13	39	79	..	1	1991	'000	17
146	137	17	12	32	78	..	1	1992		
-18.1	-11.9	-8.6	-5.6	-17.1	-1.6	..	-2.3		%	
87	86	93	83	76	87	..	..	1992		18
92	86	91	83	80	84	..	..	1993		
433	400	40	31	97	154	2	2	1992	'000	19
404	365	37	29	90	146	2	2	1993		
-6.5	-8.8	-6.7	-4.8	-6.8	-5.2	33.7	-5.6		%	
322	284	26	21	69	108	1	2	1992	'000	20
302	257	24	20	63	101	2	2	1993		
-6.2	-9.5	-7.9	-7.6	-8.4	-6.6	35.9	-8.7		%	
537.13	578.30	488.56	472.35	546.59	549.09	677.86	714.13	1992	\$	21
543.14	591.13	492.60	473.95	554.15	561.23	678.78	705.38	1993		
1.1	2.2	0.8	0.3	1.4	2.2	0.1	-1.2		%	
417.35	448.29	385.30	371.93	432.43	431.67	..	..	1992	\$	22
416.20	450.56	378.34	362.35	433.27	426.47	..	..	1993		
-0.3	0.5	-1.8	-2.6	0.2	-1.2	..	..		%	
654.66	733.38	632.38	618.11	703.25	682.99	835.62	813.88	1992	\$	23
662.07	752.50	641.92	623.42	717.06	703.37	845.26	822.55	1993		
1.1	2.6	1.5	0.9	2.0	3.0	1.2	1.1		%	
508.67	568.51	498.72	486.70	556.37	536.94	..	..	1992	\$	24
507.33	573.55	493.03	476.62	560.64	534.48	..	..	1993		
-0.3	0.9	-1.1	-2.1	0.8	-0.5	..	..		%	
429.49	436.08	365.83	336.67	387.98	441.91	494.62	576.41	1992	\$	25
435.35	444.36	369.75	336.15	398.57	446.85	472.39	556.94	1993		
1.4	1.9	1.1	-0.2	2.7	1.1	-4.5	-3.4		%	
333.71	338.05	288.51	265.09	306.95	347.41	..	..	1992	\$	26
333.60	338.69	283.99	257.00	311.63	339.55	..	..	1993		
-	0.2	-1.6	-3.1	1.5	-2.3	..	..		%	
31.5	30.6	30.0	28.3	29.3	29.2	31.0	33.1	1992	hrs	27
31.6	30.7	29.7	27.9	29.7	29.1	30.6	32.1	1993		
0.7	0.9	0.7	0.7	1.1	0.8	2.2	2.6	1992	hrs	28
0.8	1.0	0.7	0.7	1.3	0.8	1.7	2.7	1993		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Major wage settlements</b>								
29	Number of agreements		1992	493	11	5	5	14
			1993	499	15	3	10	3
30	Number of employees	'000	1992	1,318	28	7	5	30
			1993	1,415	37	6	18	3
31	Effective wage increase in base rates	%	1992	2.1	0.1	0.3	1.8	1.6
			1993	0.7	0.1	-	5.2	2.8
<b>Labour income</b>								
32	Labour income in current dollars	\$ million	1992	386.4	5.1	1.2	9.6	7.7
			1993	396.3	5.2	1.3	9.8	7.9
	Change	%		2.6	0.9	2.8	1.5	2.7
33	Labour income per employee in current dollars	\$	1992	36,300	31,200	27,700	30,400	29,900
			1993	37,000	32,000	28,000	31,900	30,600
	Change	%		1.9	2.6	1.3	4.9	2.6
34	Labour income per employee in 1986 dollars	\$	1992	28,400	25,600	21,800	24,300	23,900
			1993	28,400	25,800	21,700	25,100	24,200
	Change	%		0.1	1.0	-0.6	3.7	1.3
35	Net income from self-employment as a proportion of money income	%	1991	5.5	3.7	6.6	4.4	4.2
			1992	5.1	3.3	6.5	3.7	4.3
<b>Earnings of full-time, full-year workers</b>								
36	Average earnings of men working full time, full year	\$	1991	38,600	33,400	30,500	35,300	34,700
			1992	39,500	36,200	32,600	37,600	35,200
	Change	%		2.3	8.3	6.6	6.7	1.2
37	Average earnings of women working full time, full year	\$	1991	26,800	24,500	24,700	23,200	23,000
			1992	28,400	25,200	26,100	24,900	24,700
	Change	%		5.6	2.8	5.7	7.1	7.3
38	Ratio of female-to-male earnings	%	1991	69.6	73.4	80.8	65.8	66.1
			1992	71.8	69.7	80.1	66.0	70.2
<b>Family income</b>								
39	Average family income	\$	1991	53,100	41,700	42,800	45,100	44,300
			1992	53,700	42,100	44,400	46,900	46,500
40	Median family income	\$	1991	46,700	36,600	38,000	39,400	38,700
			1992	47,700	36,800	39,400	40,500	41,700
41	Average income of unattached individuals	\$	1991	22,500	18,200	16,500	19,100	19,900
			1992	23,200	19,600	18,800	18,800	19,000
42	Median income of unattached individuals	\$	1991	17,300	13,100	12,200	14,700	15,100
			1992	17,600	13,900	14,400	13,100	14,300
43	Average family taxes	\$	1991	10,500	6,700	7,000	8,100	7,600
			1992	10,300	6,700	7,100	8,500	7,900
44	Average family income after tax	\$	1991	42,600	35,000	35,800	37,000	36,700
			1992	43,400	35,500	37,200	38,400	38,600

See *Notes and definitions* at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
90	174	17	8	44	66	..	..	1992		29
120	146	18	13	54	48	..	..	1993		
469	347	19	12	77	170	..	..	1992	'000	30
559	235	41	40	101	103	..	..	1993		
1.1	2.4	2.4	3.3	3.6	3.5	..	..	1992	%	31
0.2	1.4	0.8	1.1	0.3	2.3	..	..	1993		
90.0	162.6	12.8	9.9	37.0	48.3	0.6	1.2	1992	\$ million	32
91.9	165.6	13.0	10.0	38.0	51.4	0.6	1.2	1993		
2.1	1.8	1.8	1.3	2.7	6.5	0.8	3.1		%	
34,600	39,100	31,600	29,600	35,000	37,000	..	..	1992	\$	33
35,200	39,500	31,900	30,100	35,800	38,600	..	..	1993		
1.8	1.0	0.8	1.7	2.3	4.4	..	..		%	
26,900	30,300	25,000	23,300	27,700	29,100	..	..	1992	\$	34
27,000	30,100	24,500	23,000	28,000	29,300	..	..	1993		
0.4	-0.7	-1.8	-1.3	1.1	0.9	..	..		%	
4.3	5.7	6.7	10.3	6.4	5.5	..	..	1991	%	35
4.2	5.3	6.5	8.7	4.4	6.4	..	..	1992		
36,700	41,500	31,900	31,900	39,300	38,700	..	..	1991	\$	36
37,300	42,200	34,900	32,700	38,700	40,900	..	..	1992		
1.6	1.6	9.2	2.6	-1.5	5.7	..	..		%	
25,700	29,000	23,800	22,100	25,300	27,100	..	..	1991	\$	37
27,600	30,400	24,500	23,100	27,200	28,600	..	..	1992		
7.1	4.8	2.6	4.4	7.5	5.4	..	..		%	
70.1	69.8	74.7	69.4	64.5	70.2	..	..	1991	%	38
73.9	71.9	70.2	70.6	70.3	70.0	..	..	1992		
48,600	58,600	46,600	45,900	55,600	54,900	..	..	1991	\$	39
48,600	58,800	50,300	48,200	54,700	56,400	..	..	1992		
42,700	52,000	41,300	40,900	48,100	50,600	..	..	1991	\$	40
43,800	52,800	43,700	41,300	47,700	50,300	..	..	1992		
20,700	24,700	20,400	20,000	23,500	22,600	..	..	1991	\$	41
21,100	26,300	18,900	20,300	22,900	23,400	..	..	1992		
15,200	20,000	16,000	14,600	19,100	18,200	..	..	1991	\$	42
15,000	20,300	14,600	14,600	17,700	20,600	..	..	1992		
10,100	11,800	8,300	8,600	11,000	10,600	..	..	1991	\$	43
9,400	11,700	9,100	8,200	10,200	10,900	..	..	1992		
38,500	46,900	38,300	37,400	44,500	44,300	..	..	1991	\$	44
39,200	47,100	41,200	40,000	44,500	45,500	..	..	1992		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
45*	Proportion below the low income cut-offs (1992 base):							
- families	%		1992 1993	13.3 14.5	18.4 15.8	7.2 7.6	13.8 14.4	11.5 11.5
- unattached individuals	%		1992 1993	39.7 40.8	44.5 47.9	38.1 40.0	48.5 36.2	40.3 46.3
- persons (population)	%		1992 1993	16.8 17.9	20.7 17.9	11.4 11.6	17.8 17.2	14.0 14.8
- children (less than 18 years)	%		1992 1993	18.9 21.3	26.4 21.3	12.3 11.3	20.5 23.0	15.6 17.7
- elderly (65 years and over)	%		1992 1993	20.6 22.3	21.7 17.8	14.5 13.3	20.0 17.0	13.8 18.1
Households and dwellings								
46*	Estimated number of households and dwellings	'000	1993 1994	10,247 10,387	182 183	47 48	336 332	256 255
47*	Average household income	\$	1992 1993	46,800 46,600	39,500 40,200	39,400 38,900	40,600 41,700	41,500 41,900
48*	Proportion of households with:							
- VCRs	%		1993 1994	77.3 79.2	76.9 78.1	74.5 77.1	77.7 81.6	78.9 79.6
- microwaves	%		1993 1994	79.1 81.5	72.0 76.5	76.6 79.2	79.5 83.4	82.0 84.3
- two or more automobiles	%		1993 1994	23.8 22.0	14.8 10.9	25.6 22.9	19.4 20.2	21.5 20.0
- vans & trucks	%		1993 1994	28.4 29.9	33.5 37.2	34.0 37.5	27.7 30.4	36.7 37.6
- air conditioners	%		1993 1994	25.7 26.8	-- --	-- --	3.9 4.5	10.2 8.2
49*	Proportion of all dwellings that are owner-occupied	%	1993 1994	64.1 64.4	78.6 79.8	74.5 72.9	72.3 71.4	76.2 78.0
50*	Proportion of all owner-occupied dwellings that are mortgage free	%	1993 1994	48.3 50.3	70.6 69.2	54.3 51.4	53.1 54.0	52.8 57.8
51*	Dwellings in need of repair as a proportion of all occupied dwellings	%	1993 1994	22.0 26.3	31.3 32.2	25.6 31.3	27.1 33.5	26.1 30.6
52	Median rent-to-income ratio	%	1992 1993	22 22	16 16	23 20	22 24	19 19
Labour force income profile								
53	Income:							
- number reporting	'000		1992	19,649	394	91	642	525
- amount	\$ million		1992	486,751	7,442	1,832	13,881	10,715
- median	\$		1992	18,600	13,800	15,900	16,200	15,200
- Canadian index (of median income)	%		1992	100.0	74.2	85.5	87.1	81.7
54	Labour force income:							
- number reporting	'000		1992	14,281	289	69	451	373
- amount	\$ million		1992	367,898	5,806	1,375	10,280	8,075

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
										45
14.8	11.1	14.2	13.8	16.2	13.5	..	..	1992	%	
16.8	13.2	14.3	13.5	15.1	13.9	..	..	1993		
48.9	33.6	48.3	38.3	39.8	34.1	..	..	1992	%	
48.7	36.2	42.0	35.0	42.0	37.3	..	..	1993		
18.7	14.0	19.9	18.1	20.2	17.1	..	..	1992	%	
20.8	16.0	19.1	17.4	18.3	18.1	..	..	1993		
18.3	16.2	23.3	22.8	24.2	19.8	..	..	1992	%	
21.0	21.3	25.2	23.1	20.1	21.8	..	..	1993		
28.9	15.9	23.6	12.1	24.0	20.8	..	..	1992	%	
30.0	20.0	23.0	14.5	21.3	20.5	..	..	1993		
2,688	3,765	387	361	923	1,302	..	..	1993	'000	46
2,720	3,820	397	361	928	1,344	..	..	1994		
41,900	51,800	42,500	41,200	48,000	48,000	..	..	1992	\$	47
40,500	51,500	42,800	40,900	49,600	48,500	..	..	1993		
										48
72.6	79.7	75.5	71.7	82.3	78.6	..	..	1993	%	
74.0	82.1	75.1	75.6	83.0	80.6	..	..	1994		
75.9	80.0	79.8	84.8	84.8	78.0	..	..	1993	%	
79.1	81.5	81.4	85.3	86.7	81.1	..	..	1994		
22.7	25.6	22.5	21.3	26.5	22.6	..	..	1993	%	
20.2	24.2	22.1	20.3	23.7	21.3	..	..	1994		
17.3	25.6	35.7	44.3	44.7	39.2	..	..	1993	%	
19.1	26.8	34.0	46.8	48.4	39.5	..	..	1994		
15.3	44.7	45.7	33.8	8.9	9.1	..	..	1993	%	
15.2	48.1	48.1	31.6	8.2	8.6	..	..	1994		
56.4	64.4	69.5	71.7	67.8	66.1	..	..	1993	%	49
57.0	65.1	70.3	72.3	66.4	65.6	..	..	1994		
46.3	46.6	53.9	60.6	45.7	47.1	..	..	1993	%	50
46.5	49.5	54.5	60.9	49.2	49.8	..	..	1994		
20.7	20.9	26.6	23.8	25.7	20.4	..	..	1993	%	51
24.4	26.1	35.0	28.2	28.2	21.9	..	..	1994		
20	23	23	21	21	25	..	..	1992	%	52
21	23	22	20	23	25	..	..	1993		
										53
4,972	7,332	788	669	1,765	2,418	19	33	1992	'000	
112,382	198,714	17,183	14,283	45,555	62,748	558	1,018	1992	\$ million	
17,000	20,700	16,400	15,800	19,300	19,500	24,300	22,000	1992	\$	
91.4	111.3	88.2	84.9	103.8	104.8	130.6	119.4	1992	%	
										54
3,500	5,353	553	486	1,384	1,778	17	29	1992	'000	
85,877	149,875	12,471	10,075	35,582	47,071	494	915	1992	\$ million	

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
55	Employment income:							
	- number reporting	'000	1992	13,928	273	68	438	361
	- amount	\$ million	1992	350,358	4,779	1,175	9,500	7,241
	- median	\$	1992	19,900	10,200	12,000	16,800	14,700
	- Canadian index (of median employment income)	%	1992	100.0	51.3	60.3	84.4	73.9
56	Self-employment income:							
	- number reporting	'000	1992	1,993	32	11	53	36
	- amount	\$ million	1992	21,415	255	106	684	343
57	Unemployment insurance benefits:							
	- number reporting	'000	1992	3,446	150	31	147	143
	- amount	\$ million	1992	17,541	1,027	200	780	834
<b>Economic dependency profile</b>								
58	Transfer payments:							
	- amount	\$ million	1992	90,397	2,223	513	3,266	2,693
	- economic dependency ratio (EDR)		1992	25.80	46.52	43.63	34.38	37.20
	Canadian index (of EDR)	%	1992	100.0	180.3	169.1	133.3	144.2
	Unemployment Insurance benefits:							
	- amount	\$ million	1992	17,541	1,027	200	780	834
	- contribution to EDR	%	1992	5.01	21.50	17.05	8.21	11.52
	Family Allowance benefits:							
	- amount	\$ million	1992	2,831	64	15	92	77
	- contribution to EDR	%	1992	0.81	1.34	1.24	0.97	1.06
	Federal sales tax credits:							
	- amount	\$ million	1992	2,740	68	15	98	84
	- contribution to EDR	%	1992	0.78	1.43	1.24	1.03	1.16
	Child Tax Credit benefits:							
	- amount	\$ million	1992	2,419	65	14	85	74
	- contribution to EDR	%	1992	0.69	1.37	1.22	0.90	1.02
	Old Age Security benefits:							
	- amount	\$ million	1992	11,807	199	59	402	318
	- contribution to EDR	%	1992	3.37	4.16	5.02	4.23	4.39
	CPP/QPP benefits:							
	- amount	\$ million	1992	15,116	229	63	551	385
	- contribution to EDR	%	1992	4.31	4.78	5.37	5.80	5.31
	Other pension benefits:							
	- amount	\$ million	1992	20,154	257	78	753	483
	- contribution to EDR	%	1992	5.75	5.37	6.62	7.93	6.66
	Non-taxable income/provincial tax credits:							
	- amount	\$ million	1992	17,790	314	69	504	439
	- contribution to EDR	%	1992	5.08	6.57	5.86	5.30	6.07

See *Notes and definitions* at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
3,392	5,232	541	478	1,359	1,740	16	28	1992	'000	55
80,457	144,653	11,999	9,689	34,376	45,143	468	879	1992	\$ million	
19,200	22,300	17,600	15,100	19,800	20,500	23,900	23,900	1992	\$	
96.5	112.1	88.4	75.9	99.5	103.0	120.1	120.1	1992	%	
358	722	104	139	254	278	3	2	1992	'000	56
4,413	8,807	855	972	1,799	3,144	20	18	1992	\$ million	
1,037	1,054	114	91	261	407	5	6	1992	'000	57
5,419	5,223	472	386	1,207	1,929	27	36	1992	\$ million	
22,406	35,166	3,502	2,899	6,609	10,957	61	102	1992	\$ million	58
27.85	24.31	29.19	29.92	19.23	24.27	12.98	11.58	1992		
107.9	94.2	113.1	116.0	74.5	94.1	50.3	44.9	1992	%	
5,419	5,223	472	386	1,207	1,929	27	36	1992	\$ million	
6.74	3.61	3.93	3.98	3.51	4.27	5.70	4.10	1992	%	
693	1,015	119	116	295	334	3	9	1992	\$ million	
0.86	0.70	0.99	1.20	0.86	0.74	0.71	1.03	1992	%	
760	925	121	105	240	318	2	4	1992	\$ million	
0.94	0.64	1.01	1.09	0.70	0.70	0.48	0.51	1992	%	
616	784	119	121	255	274	3	9	1992	\$ million	
0.77	0.54	0.99	1.25	0.74	0.61	0.54	0.97	1992	%	
2,868	4,472	569	517	857	1,538	4	5	1992	\$ million	
3.56	3.09	4.74	5.34	2.49	3.41	0.78	0.58	1992	%	
3,499	6,146	637	561	1,092	1,942	6	5	1992	\$ million	
4.35	4.25	5.31	5.79	3.18	4.30	1.26	0.60	1992	%	
4,182	8,594	774	640	1,493	2,886	8	7	1992	\$ million	
5.20	5.94	6.45	6.60	4.34	6.39	1.69	0.82	1992	%	
4,370	8,007	692	452	1,171	1,737	8	26	1992	\$ million	
5.43	5.54	5.77	4.67	3.41	3.85	1.81	2.96	1992	%	

See *Notes and definitions* at end of table.



## Key labour and income facts

### Notes and definitions

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| <p><b>No.</b></p> <p><b>1</b> Persons aged 15 and over who are employed or unemployed.</p> <p><b>2</b> The labour force as a proportion of the population aged 15 and over.</p> <p><b>4</b> Persons who usually work less than 30 hours per week.</p> <p><b>7</b> Unemployed as a proportion of the labour force.</p> <p><b>8</b> This rate and rates shown as Indicators 9 and 10 are described in <i>Perspectives on Labour and Income</i> (Statistics Canada, Catalogue 75-001E) 4, no. 4 (Winter 1992): 35-43.</p> <p><b>9</b> The full-time labour force includes persons working full time, those working part time involuntarily, and unemployed persons seeking full-time work.</p> <p>The part-time labour force includes persons working part time voluntarily and unemployed persons seeking part-time work.</p> <p>Discouraged workers and others on the margins of the labour force are persons who have looked for work in the past six months, but not during the reference week because they believed none was available or because they were waiting for recall or for replies from employers.</p> <p><b>10</b> The rate shows hours lost through unemployment (unemployed multiplied by average actual weekly hours) and through underemployment (that is, short-time work schedules and involuntary part-time employment) as a proportion of hours worked plus hours lost.</p> <p><b>12</b> The number of persons employed in an age group expressed as a percentage of the population for that age group.</p> <p><b>13</b> Employees work for an employer for remuneration, usually in the form of a wage or salary.</p> <p>Self-employed workers are working owners of incorporated or unincorporated businesses with or without paid help.</p> | <p><b>No.</b></p> <p><b>29</b> Data are for agreements involving bargaining units of 500 or more employees. The total includes federal and provincial agreements.</p> <p><b>32</b> Labour income comprises gross wages and salaries (including directors' fees, bonuses, commissions, gratuities, taxable allowances and retroactive pay) and supplementary labour income (payments made by employers for the benefit of employees, including contributions to health and welfare schemes, pension plans, Workers' Compensation and Unemployment Insurance).</p> <p><b>33</b> Labour income per employee is calculated using LFS estimates of paid workers excluding those absent without pay during the entire reference week.</p> <p><b>45</b> For an explanation of the methodology underlying the low income cut-offs, see <i>Income Distributions by Size in Canada</i> (Statistics Canada, Catalogue 13-207).</p> <p><b>52</b> The rent-to-income ratio refers to rent in the reference year divided by income in the previous year.</p> <p><b>53-54</b> Data are derived from tax returns filed in the spring of the year following the reference year. The mailing address at the time of filing determines the province.</p> <p>Economic dependency ratio:</p> $\text{EDR} = \frac{\text{Total transfer payments}}{\text{Total employment income}} \times 100$ <p>Example: An EDR of 23.47 indicates that for each \$100 in employment income earned by Canadians in 1991, an additional \$23.47 of income was received in the form of transfer payments.)</p> |
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# In the works

*Here are some of the topics to be featured in upcoming issues*

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## ■ Multiple jobholding families

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Over the last decade, dual-career families have become the norm. During the same period, moonlighting has also increased significantly. This note looks at the incidence of multiple jobholding in husband-wife families.

## ■ Family hours

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This article examines the combined weekly hours usually worked by dual-earner couples. It discusses the differing effects of the presence and age of children on the hours worked and looks at some characteristics of spouses.

## ■ Volume of work in low income families

---

A descriptive note on the volume of paid work done by non-elderly families with incomes below the low income cut-offs (LICO). It compares the number of weeks worked in 1992 by LICO families with the weeks worked by other families.

## ■ Co-op graduates

---

Expecting to face a tough job market, many university students turn to co-op programs. But does this option pay off when they graduate? The Survey of 1990 Graduates, conducted in 1992, provides some answers.

## ■ Sleeping on the job?

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Using the 1991 General Social Survey, this study provides estimates on how many Canadian workers are chronically tired. Incidence rates are calculated for several labour market variables.

## ■ Pension plans

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A focus not on the pension plans themselves, but on the members: how their pension accruals can be vastly different, how many earn relatively generous benefits, and how many have much lower pension savings.

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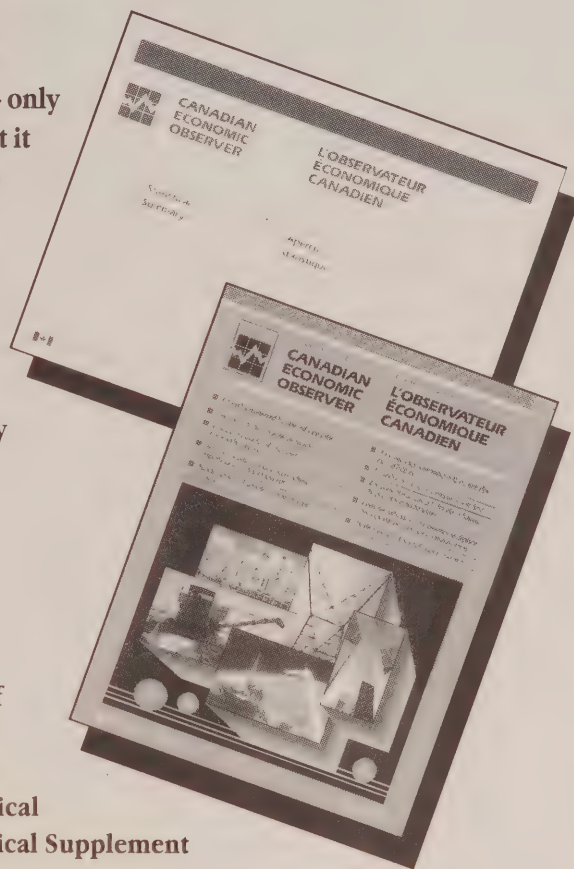
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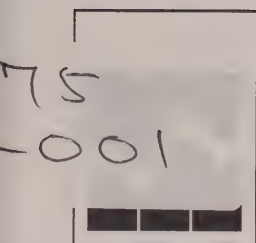
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# PERSPECTIVES

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## The labour market: Year-end review

### HIGHLIGHTS

- By many standards, 1994 was a good year for employment. Except for declines in January and October, growth was sustained, with four of the monthly gains surpassing 60,000. The 261,000 increase in annual average employment was almost double that of 1993.
- Buoyed by surging merchandise exports, the goods-producing sector once more became a major source of employment growth in 1994, accounting for about one-third of the overall increase, even though it represented only one-fourth of total employment. This sector had lost a total of 325,000 jobs during the period 1991 to 1993.
- Compared with 1993, employment gains in 1994 were more widespread among major industries, occupations and regions. Most of the growth was full-time. Also, for the first time in four years, every major age group recorded gains. The annual levels rose by more than 110,000 for both adult men and women. Even youths (aged 15 to 24) saw an end to their employment declines of the past five years, with a modest increase of 14,000.
- Average unemployment in 1994 fell below 1.5 million for the first time in three years. At year's end, the unemployed were estimated at 1,356,000, fully 212,000 fewer than in December 1993. The unemployment rate also fell, from 11.2% in 1993 to 10.3% in 1994. More notably, the rate dropped below 10% at year's end (9.6% in both November and December), the first time since January 1991.
- Labour force participation rates declined in 1994 for all major age groups except for those 55 and over, where it increased. The decline among men aged 25 to 54 continued a longstanding trend, but that of women of the same age, the second in three years, is puzzling, since this group continued to record job gains. Before 1992, the participation rates of these women had risen continuously in conjunction with employment gains, recession or not.

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# The labour market: Year-end review

Ernest B. Akyeampong

The pace of both output and employment growth picked up in 1994. Led by a boom in merchandise exports, the gross domestic product (GDP) posted real growth of 1% or better in each of the first three quarters of the year. The increase in exports, caused by a combination of strong economic growth in the United States and a weak Canadian dollar, was widespread, but strongest in automotive products and in machinery and equipment.

At home, businesses responded by increasing capital utilization in their factories and investment in plant and equipment. By the third quarter of 1994, corporate pre-tax profits had surged to their highest level since mid-1989. Housing starts showed some growth in the spring, but a rise in interest rates hampered further construction and the sale of existing houses. Consumer confidence, which had been rising since the middle of 1993, was not fully matched by spending on goods and services in 1994. Wage increases and inflation remained modest, and tended to offset each other to a large extent, leaving purchasing power little changed. The increase in consumer spending in the first half of the year diminished slightly with rising interest rates, which curtailed spending on big-ticket items such as cars, furniture and appliances. Total government expenditures fell in each of the first three quarters.

The growth in output was mirrored in the labour market. Despite a sharp decline in January, employment gains accelerated through the first three quarters (Chart A). At 12.6 million, the average 1994 employment level surpassed its

Ernest B. Akyeampong is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-4624.

Chart A  
Employment growth accelerated through the first three quarters of 1994.



Sources: Labour Force Survey, and National Accounts and Environment Division.

1990 peak by 72,000, and by year's end the unemployment rate had slipped into single digits for the first time since January 1991.

## Employment growth more widespread

By many accounts, 1994 was a good year for employment. For the first time since 1992 the economy was able to shed its "jobless recovery" image. Except for declines in January and

This article is based on information available as of January 6th, 1995. All monthly data have been seasonally adjusted to provide a better picture of underlying trends. Seasonal movements are those caused by regular annual events such as climate, holidays, vacation periods, and cycles related to crops and production. Seasonally adjusted series still contain irregular and longer-term cyclical fluctuations.

Note: This article is based on unrevised Labour Force Survey estimates. Revised data will not significantly change the findings.



October, growth was sustained, with four monthly gains surpassing 60,000. Not only was the increase of 261,000 in annual average employment almost double that of a year earlier, but the 2.1% growth slightly exceeded the pre-recession 1989 rate.<sup>1</sup> In addition, almost all employment growth was full-time and, compared with 1993, more widespread. However, in most areas of the public sector (public administration, health and social services), employment declined or remained unchanged.

### Goods and service sectors both contributed

A distinctive characteristic of the 1994 labour market was the strong employment growth in the goods-producing sector. This sector, which had lost a total of 320,000 jobs in 1991 and 1992, dropped a further 5,000 in 1993. The situation turned around in 1994. Buoyed by surging merchandise exports, the goods sector once more became a major source of employment growth, accounting for about one-third of overall growth, even though it represented only one-fourth of total employment.

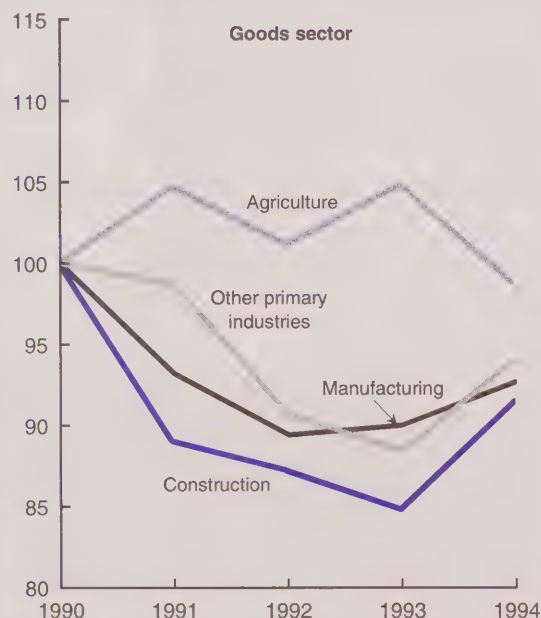
Not all major industries in the goods sector shared in this growth, however. Agricultural employment, for example, fell by 27,000. Construction had the best employment growth rate (7.8% or 52,000 jobs), though most of the increase occurred during the first half of the year and was concentrated in non-residential. Other primary industries had the second fastest employment growth rate (6.4% or 16,000 jobs), mostly because of increased exports of forestry products as well as oil and gas. For both construction and other primary industries, the 1994 employment growth was the first in four years (Chart B).

In line with rising capacity utilization, manufacturing registered sustained quarterly employment growth during the last three quarters of 1994, with the annual average topping the previous year's level by 56,000. Almost all the gains came from durable manufacturing, and reflected increased activity in automotive industries (especially in the first half of the year), electrical products, machinery, equipment and appliance manufacturing. Despite the strong

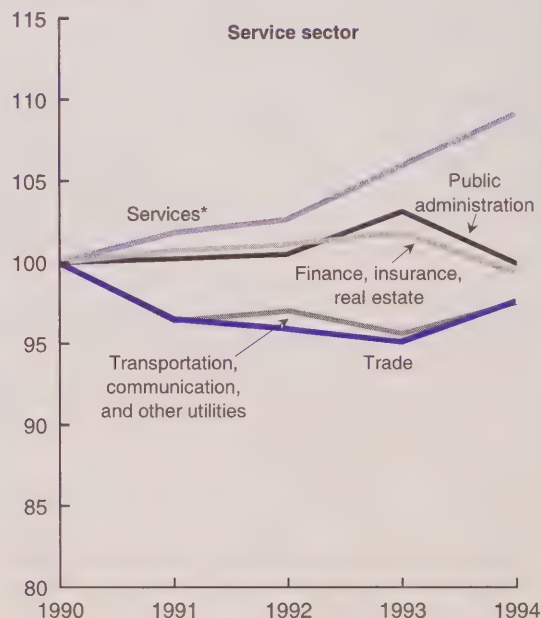
Chart B

**In 1994, only service\* employment exceeded its 1990 level.**

1990 average = 100



1990 average = 100



Source: Labour Force Survey

\* Community, business and personal services

1994 showing, average manufacturing employment still remained 145,000 below its 1990 level.

The service-producing industries, which had accounted for almost all employment growth in 1993, contributed just two-thirds of the overall increase in 1994. The sector's employment gain of 170,000 exceeded the previous year's growth by only 21,000. Indeed, the growth rate in this sector fell behind that of the goods sector in 1994 (1.9% versus 2.8%), for only the second time in the past decade.

Two major service-producing industries actually lost employment in 1994: public administration (-26,000) and finance, insurance and real estate (-18,000). The decline in the former resulted primarily from administrative cut-backs, while in the latter it was partly attributable to the real estate slump, especially during the second half of the year.

Employment in transportation, communication and other utilities has fluctuated in recent

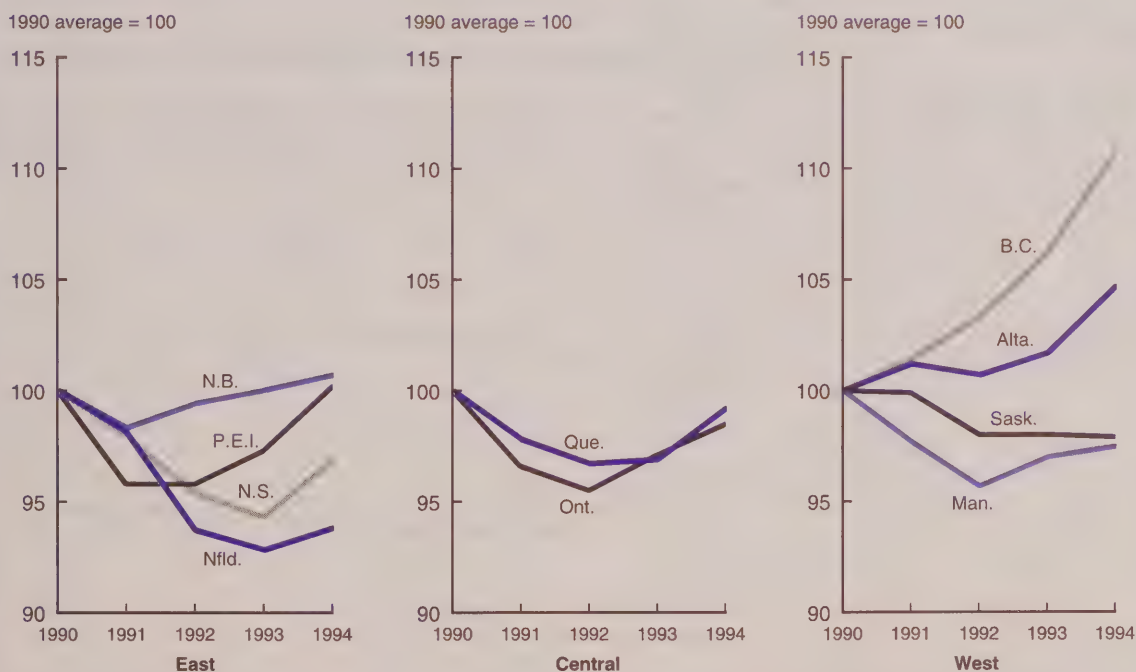
years and increased by 17,000 in 1994. Almost all the gain occurred in the second half of the year.

After three consecutive years of decline, employment in trade rose by 54,000 in 1994. Most of this growth occurred in the first half of the year, reflecting consumer demand. The decline in cross-border shopping may have contributed to the growth in retail trade employment, while the larger rate of increase in wholesale can be attributed to the export boom.

Employment in community, business and personal services, which accounts for a little over a third of total employment, rose in 1994 (137,000). The increase was slightly smaller than that of 1993, and reflected a near-zero growth in health and social services – an area that has been affected by recent government fiscal restraint. Employment in accommodation, food and beverage services increased by 18,000, but business services registered the largest gain (75,000) in the sector. Employment growth in this component,

Chart C

**Except for Alberta and British Columbia, average employment remained below 1990 levels.**



which includes consultants, accountants and legal offices, is consistent with the generally held belief that companies continue to contract out work.

### More provinces shared in job growth

Regional distribution of employment growth was also more widespread in 1994. In 1993, almost all employment gains were concentrated in British Columbia and Ontario, with the former registering the largest increase. In 1994, Alberta, Quebec and Nova Scotia joined Ontario and British Columbia with sizeable employment gains (Chart C).

Employment edged up in both Newfoundland and Prince Edward Island, two areas still feeling the effects of the fishing moratorium. New Brunswick's employment level also rose marginally, while Nova Scotia had an increase of 10,000 as a result of strong growth mainly in manufacturing and construction. About half the gain was centred in the Halifax census metropolitan area (CMA).

Quebec's employment growth in 1994 totalled 70,000, following a marginal gain in 1993. The province's strong showing was due to improvement in community, business and personal services, trade, and manufacturing activity. About half of the province's employment growth occurred in the Montreal CMA.

Ontario's employment gain of 71,000 was smaller than that of a year earlier. Community, business and personal services, trade and manufacturing (especially automotive and related industries, as well as other machinery manufacturing) recorded sizeable gains. Moreover, much of the gain was concentrated in southwest Ontario. Three area CMAs, namely, Hamilton, Windsor and St. Catharines, were among the five in the country with the best employment growth rates. Two others in the area, Kitchener-Waterloo (6.6%) and London (7.4%), counted among the CMAs with the lowest unemployment rates in Canada. Employment in the Toronto CMA fell marginally, the fourth consecutive annual decline.

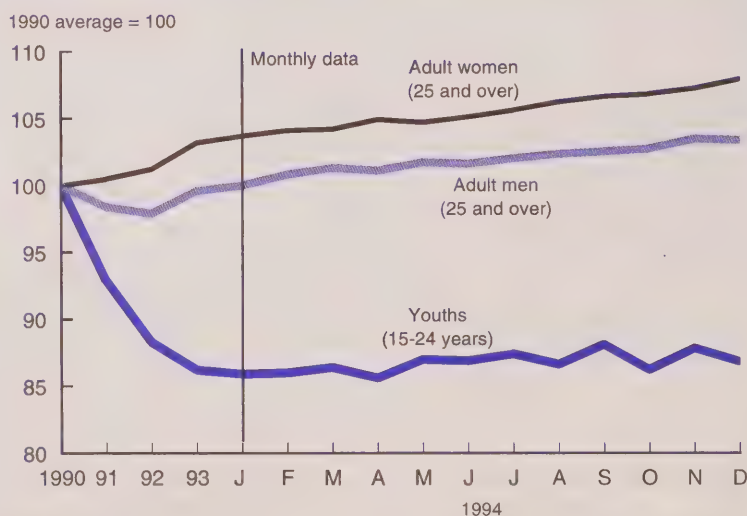
Manitoba's employment edged up slightly (3,000) and Saskatchewan's remained unchanged. Alberta posted an employment gain of 37,000, thanks to increased activity in transportation, communication and other utilities; trade; community, business and personal services, and construction. The province's employment growth rate was bettered only by that of British Columbia and Prince Edward Island.

As in the previous three years, British Columbia had the largest annual percentage increase in employment. The province's 1994 employment level was 66,000 higher than in 1993. British Columbia continued to benefit from its pulp and other forest-related exports, as well as community, business and personal services, construction, and finance, insurance and real estate. This province, which was hardly touched by the recent recession, accounted for 25% of the nation's employment growth in 1994, though it represented only 13% of the national workforce.

### Employment gains primarily among adult workers

For the first time in four years, every major age group recorded employment gains in 1994, though the distribution was uneven (Chart D). While the gain made by young men and women

Chart D  
Youth employment saw only modest growth in 1994.



Source: Labour Force Survey



(15 to 24 years of age) was modest (14,000), it marked the group's first increase in six years. Adult women, whose employment level continued to increase during the recession, recorded another impressive employment gain of 112,000 in 1994. Adult men were the biggest beneficiaries (135,000) in 1994, thanks to strong employment growth in the goods-producing industries. Aided also by the preceding year's increase of 100,000, adult men more than recovered the jobs lost in 1990 and 1991.

### Almost all employment growth full-time

About 95% of the 1994 employment gain was full-time, a big turnaround from preceding years. While full-time employment dropped during the recession, part-time employment increased. Even in 1993, the first full year of economic recovery, part-time considerably outpaced full-time growth. However, in 1994, while part-time employment fluctuated, full-time rose steadily (Chart E). The entire gain by men was full-time, as was 83% of women's gain.

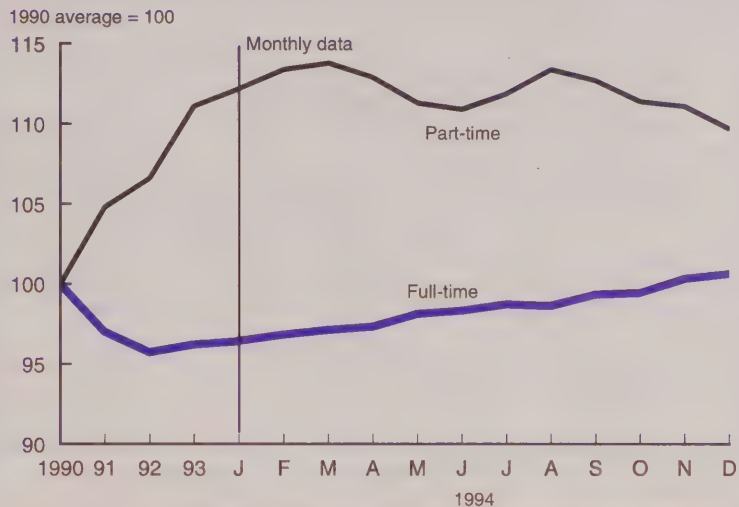
The 1994 part-time-to-total employment ratio stayed at its 1993 level, around 17%. In addition, the proportion working part time because they could not find full-time work (involuntary part-timers) remained the same, 35% of all part-timers. In 1990, the proportion had been 22% (Noreau, 1994).

### Greater job growth among blue-collar and professional occupations

The 1994 employment gain was fairly widespread among the various occupational groups. Highly unionized blue-collar jobs grew fastest. For example, transportation workers saw their numbers increase by 35,000; processing, machining and fabrication by 57,000; and construction by 25,000. Of the white-collar occupations, professionals recorded the largest absolute growth (84,000). Workers in service occupations increased by 26,000; those in managerial and administrative positions by 5,000; and material handlers by 35,000.

Chart E

By year's end full-time employment surpassed its 1990 average.



rate fell below 10% at year's end (9.6% in both November and December), the first time since January 1991. All major age groups registered declines. Adult men (9.3%) joined adult women (8.9%) with single-digit unemployment rates in 1994, and the rate for youths fell by more than a full percentage point, to 16.5%.

Newfoundland was the only province where the unemployment rate rose in 1994, to 20.6% from 20.2% in 1993. The rate edged down slightly in New Brunswick (to 12.5%) and in Manitoba (to 9.1%). All other provinces recorded large declines, with five of them – Nova Scotia, Quebec, Ontario, Saskatchewan and Alberta – showing decreases of a percentage point or more. Ontario joined the four western provinces with single-digit unemployment in 1994.

### ... but so did participation rates

Besides employment growth, a decline in the labour force participation rate (the proportion of working age Canadians with jobs or looking for work) also contributed to the overall drop in unemployment in 1994. This was the fourth year of decline. The 156,000 growth in the labour force in 1994 – the result of an increase in population rather than a rise in participation – fell short of employment growth (261,000), thus causing the unemployment level and rate to decline.

The decline in the participation rate is puzzling, as it tends to increase in good economic times. However, three years into the current recovery and expansion, the overall rate continued to fall (Table). Which groups were responsible for the 1994 decline, and what are some of the likely underlying factors?

Only workers aged 55 and over, who have tended to take early retirement in recent years, did not contribute to the overall decline in 1994: their participation rate actually rose slightly (from 24.8% to 24.9%). But the rate for youths, as it had for the past several years, declined in 1994, reflecting their increased tendency to remain in

Table  
Annual average labour force participation rates

	1990	1991	1992	1993	1994
	%				
<b>Both sexes</b>					
<b>15 and over</b>	<b>67.0</b>	<b>66.3</b>	<b>65.5</b>	<b>65.2</b>	<b>64.9</b>
15-24	68.9	67.1	65.1	63.3	62.7
25-54	84.3	84.1	83.4	83.6	83.3
55 and over	26.5	25.6	25.4	24.8	24.9
<b>Men 25-54</b>	<b>93.3</b>	<b>92.5</b>	<b>91.7</b>	<b>91.6</b>	<b>91.4</b>
25-34	93.7	92.6	91.6	91.7	91.2
35-44	94.4	93.8	92.9	93.0	92.8
45-54	91.0	90.6	90.0	89.7	89.8
<b>Women 25-54</b>	<b>75.6</b>	<b>75.8</b>	<b>75.3</b>	<b>75.7</b>	<b>75.4</b>
25-34	77.2	77.2	75.9	75.6	75.4
35-44	78.4	78.4	77.7	78.6	78.3
45-54	68.7	69.9	71.2	71.8	71.4

Source: Labour Force Survey

school (Sunter, 1994). Men aged 25 to 54 also recorded a drop from 91.6% in 1993 to 91.4% in 1994, attributable to those under 45. Women aged 25 to 54 also contributed to the overall decline. Their participation rate fell from 75.7% to 75.4%, with each age group (25 to 34; 35 to 44; and 45 to 54) registering a decline.

The decline in the participation rate of men aged 25 to 54 is neither new nor surprising: it continues a trend dating back three decades or more. But the decline for women in the same age range was only the second during that period (the first was in 1992) – an intriguing labour market development. The drop is even more puzzling, since annual average employment for women in this age group has increased continuously for three decades, recession or not. This raises the question of whether their participation rate has passed its peak, as men's did many years ago, and has begun a similar, long-term decline. Future data will clarify the situation.

### ... and long-term unemployment worsened

Long-term unemployment, especially that lasting more than a year, remains high. In 1990, these unemployed numbered 62,000; by 1994, their numbers had more than tripled to 217,000. Adult men accounted for 56% of this group in 1994. The average duration of unemployment, which stood at 16.9 weeks in 1990, jumped to 25.1 in 1993, and rose again to 25.7 weeks in 1994.

The increase in average duration is partly the result of compositional shifts among the unemployed. For example, in 1990, persons whose unemployment had lasted more than a year accounted for only 6% of total unemployment; by 1994, this proportion had risen to 15%.

### International comparisons

Among the G-7 countries, Canada's 1994 employment growth of 2.1% was bettered only by that of the United States (3.1%).<sup>2</sup> Preliminary estimates from the Organisation for Economic Co-operation and Development in December 1994 put the growth rates in Japan and United Kingdom well below 1%, and projected declines for Germany, France and Italy.

### Summary

In many respects, real GDP and labour market performance in 1994 resembled that of the expansionary years of the mid-1980s – both registered sustained high growth rates. Exports played a big role in the improvement of these two key economic indicators. In addition, employment increases were widespread among the major industries, occupations, and regions, as well as among adult men and women. Even youths saw an end to their employment declines of the past five years.

There were differences between the 1994 and mid-1980s performances, however. Consumer spending in 1994 was modest, and in most areas of the public sector, employment declined or remained unchanged. That almost all of the employment increase in 1994 was full-time was unusual. And the decline in the labour force participation of women aged 25 to 54 was unexpected. □

### ■ Notes

1 The estimated employment level at the end of 1994 was 12,800,000, about 362,000 (2.9%) higher than the December 1993 figure.

2 The 1994 U.S. data are not directly comparable to data for 1993 or earlier years because of revisions to their Current Population Survey.

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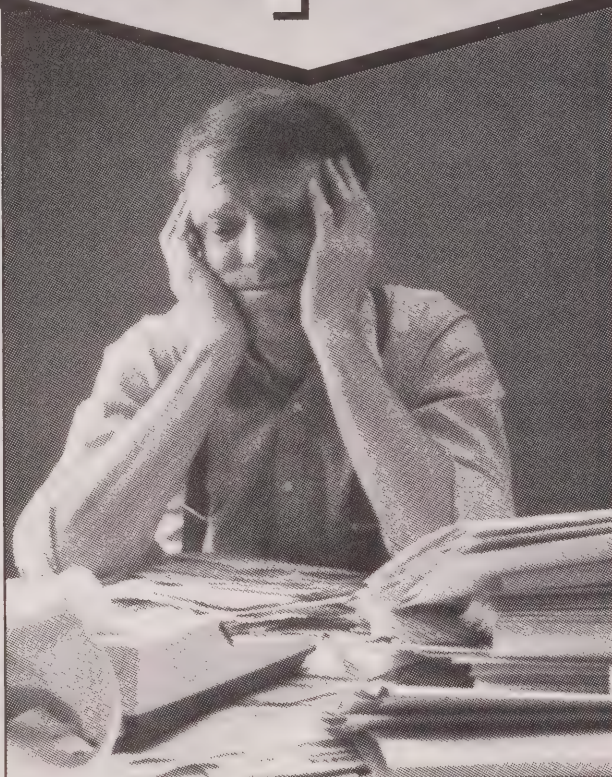
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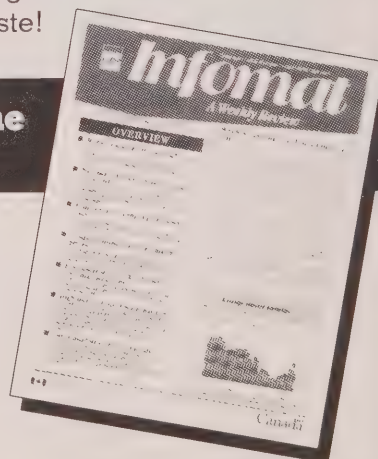
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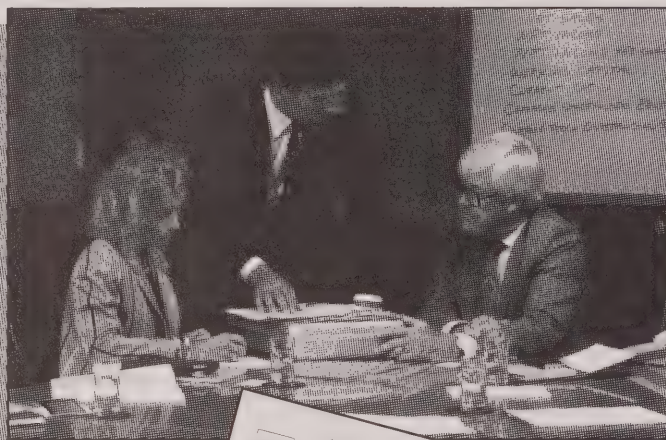
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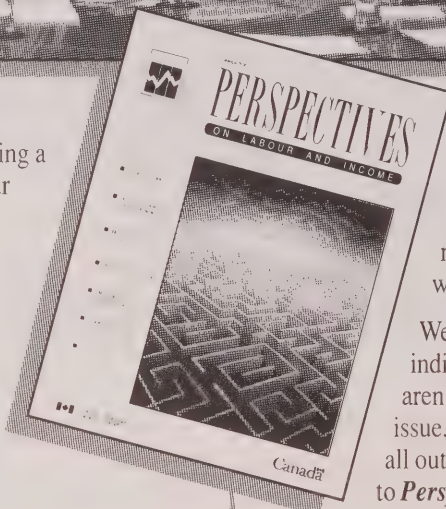
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SUMMER 1995

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# PERSPECTIVES

ON LABOUR AND INCOME

## ■ Departments

- 3 Forum
- 4 Highlights
- 35 What's new?
- 41 Key labour and income facts
- 53 In the works

## Perspectives on Labour and Income

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## ■ Articles

### 7 Families and moonlighting

*Henry Pold*

Over the last decade, moonlighting has increased significantly. A look at the incidence of multiple jobholding in husband-wife families.

### 9 Hours of working couples

*Dan Charrette*

How many combined weekly hours do dual-earner couples usually work? A discussion of the differing effects of the presence and age of children on the hours worked and a look at some characteristics of the spouses.

### 12 Work and low income

*Susan Crompton*

A description of the volume of paid work done in 1992 by low income families headed by a person under 65, comparing the number of weeks worked by these families with the number of weeks worked by other families.

### 15 Work experience

*Heather Lathe and Philip Giles*

Using the Survey of Labour and Income Dynamics, this article takes a first national look at the work experience of people of different ages, fields of work and levels of education.



# PERSPECTIVES

ON LABOUR AND INCOME

## ■ Editor-in-Chief

Ian Macredie  
(613) 951-9456

## ■ Managing Editor

Cécile Dumas  
(613) 951- 6894

## ■ Assistant Managing Editor

Henry Pold  
(613) 951-4608

## ■ Editors

Susan Crompton  
Mary Sue Devereaux  
Catherine Hardwick  
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## ■ Data and Graphics

Pino Battisti  
Mary McAuley  
Lucie Parisien  
Jeannine Usalcas

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Andrée Hébert  
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Lucie Parisien

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## ■ Design and Composition

Dissemination Division

## 20 Pension plan potpourri

*Hubert Frenken*

A focus not on the pension plans themselves, but on the members: how their pension accruals can be vastly different, how many earn relatively generous benefits and how many have much lower pension savings.

## 28 Tired workers

*Susan Crompton*

Lack of sleep is not the only cause of daytime sleepiness; many other things can induce it, including excessive warmth, boredom, or performing a demanding but uninteresting task. This study measures tiredness based on respondent assessment of drowsiness during working hours.

## 32 Hiring difficulties in manufacturing

*Claude Robillard*

Canadian manufacturers surveyed earlier this year reported some hiring problems. A glance at the type of labour shortages cited by small and large firms.

## Symbols

The following standard symbols are used in Statistics Canada publications:

..	figures not available
...	figures not appropriate or not applicable
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# Forum

## Letter from the Editor-in-Chief

■ Twenty or thirty years ago, when Canadians worked a fairly standard 35 to 40 hours a week, the link between the amount of paid work in the economy and the people doing it was very strong. If the number of people employed changed, economists knew approximately how much the volume of work had also changed. In recent years, though, the linkage between estimates of employment and the volume of work has been eroded, and calculating change is not as straightforward as it once was. If the size of the workforce is suddenly different, the amount of work in the economy may have gone up, gone down or stayed the same; it all depends on the type of employment that changed and the direction of the shift. Employment levels alone are not sufficient to provide even a rough approximation of the amount of work in the economy because there is now a much more statistically significant dispersion of hours worked in a given week. Among the reasons for this dispersion are the increase in part-time employment, and the growing polarization of full-time hours, with many full-time workers hovering at the margins of part-time employment and many others putting in over 50 hours a week.

But not only is the range of working hours greater than before, there is growing evidence that work patterns are more unpredictable. For example, workers "on-call" have variable hours dictated largely by their employers; on the other hand, the hours worked by the self-employed may be set by their own inclination or the volume of business they can generate. The Survey of Work Arrangements hinted at this in 1991, and recent experience developing questions for the redesigned Labour Force Survey (to be introduced in 1997) tends to confirm it. Test questions on hours of work for the new Labour Force Survey have illustrated the data collection problems posed by variable work patterns: respondents have more and more trouble answering the current question, "How many hours per week do you usually work at your job(s)?"

The eroding match between employment and volume of work is important not simply because economists like to estimate the economy's capacity to generate work. Nor, at the individual level, is it only because the more one works, the more one is paid. Rather, it is because of an interactive effect: it appears that people working longer hours tend to be paid more per hour than those working shorter hours.

Also, work is increasingly marked by a pattern in which some workers have few hours coupled with few weeks of employment, while others have many hours every week of the year. For example, the proportion of women employed

full time full year rose from 45% in 1980 to 51% in 1992; at the same time, full-time full-year employment among men declined from 68% to 64%. These dramatic shifts in employment patterns are occurring beneath a deceptively calm surface: the aggregate figure for both sexes shows the percentage of full-time full-year workers was virtually the same in 1992 (58%) as in 1980 (59%).

Some union leaders and labour market observers have recommended that hours of work be redistributed. They suggest that employers reduce the workload of those putting in too many hours and give the excess work to those with few or no hours. Underlying this proposal is the belief that having fairly uniform hours of work is more desirable than the alternative that has emerged in recent years.

In this issue, three articles address the question of volume of work. Henry Pold discusses "Families and moonlighting," a situation in which the spouses are holding down three or four jobs; Dan Charrette examines changing "Hours of working couples," comparing weekly hours worked by couples with and without children; and Susan Crompton shows in "Work and low income" why some families cannot make ends meet.

The volume and distribution of work in the economy offer simply one more example of the way in which the labour market is becoming more complex. These changes make data collection more problematic for survey statisticians, and challenge the long-held assumptions of data users.

Ian Macredie  
Editor-in-Chief

□

**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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# Highlights

## Families and moonlighting

- Over the last decade, the number of families with one or both spouses moonlighting jumped by more than 50% – reaching 362,000 in 1994. The families most likely to have moonlighters are young and have no children at home.

## Hours of working couples

- Continuing a trend started more than a decade ago, in 1994 families in which both spouses worked outside the home outnumbered those with just one employed spouse: 3.3 million versus 1.9 million.
- A large majority of dual-earner families had combined weekly hours totalling 60 or more; only 12% had a shorter combined working schedule.
- Among the 20% of couples usually working long hours (90 or more hours a week), a relatively high proportion of wives were well educated. In 1994, 24% of wives in such dual-earner couples had a university degree, compared with 17% in couples with shorter combined work weeks.
- The average combined work week of all dual-earner couples varied only slightly with the presence and age of children: from 76.5 hours for couples with preschoolers to 79.2 hours for those with no children under age 16.
- The proportion of wives working 50 or more hours a week is relatively small except when the husband works a similar schedule.

## Work and low income

- Close to a million (14%) non-elderly Canadian families had incomes that fell below the low income cut-offs (LICO) in 1992. In 66% of these families, at least one

adult had worked at some time during the year, compared with 98% of non-LICO families.

- This study was based on a new measure of the total volume of paid work done within families. In this measure, all weeks worked by all family members were added together and any weeks of part-time employment were converted to a full-time equivalent.
- As expected, this measure of the volume of work showed that low income families had less paid work than other families. Full-time employment accounted for only 45% of the person-weeks worked by LICO families, compared with 71% for non-LICO families.
- At least one adult worked in 86% of the two-parent families with incomes below the LICOs. However, they had about half the volume of work reported by other two-parent families.
- Only 48% of female lone-parent families below the LICOs in 1992 had any employed family members that year, while 97% of their non-LICO counterparts had at least one adult in the workforce.

## Work experience

- The Survey of Labour and Income Dynamics (SLID) collects unique data on lifetime work experience, beginning with a person's first full-time paid job.
- In 1993, the paid work experience of men and women approaching retirement age – 60 to 64 years – averaged 27 years, or close to 60% of their adult life. The average experience of all persons aged 15 to 69 was 14 years.
- Below age 30, women and men had approximately the same level of work experience. In contrast, the average experience of women aged 55 to 69 was less than half that of men.
- The paid work experience of women aged 45 and older who had raised children was 15 years, compared with 27 for those who had not.

## ■ Pension plan potpourri

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- In Canada, nearly half of employees are covered by employer-sponsored registered pension plans (RPP). However, the benefits provided by these plans are far from homogeneous. RPPs come in a variety of forms and yield widely different benefits to the members upon retirement.
- The most generous pensions are those linked to earnings at or near retirement. In contrast, members of defined contribution plans (similar to any savings plan) and those whose pension is a fixed amount for each year of service tend to collect much leaner benefits.
- Size of firm and type of industry play a role in the kind of pension plan held by workers.
- As a whole, female RPP members are more likely than the male participants to be in plans that yield larger pensions. However, these pensions depend mostly on earnings and years of service, both of which may lower benefits accrued by women.

## ■ Tired workers

---

- About 4% of the Canadian workforce was chronically tired in 1991, and had trouble staying awake "most of the time." Drowsiness did not seem to be more common in some jobs than others; nor was any particular industry notable for having a large concentration of tired workers.
- A high proportion of tired workers were worried about something on the job. Tired men were the big worriers – 60% compared with only 40% of their non-drowsy counterparts. By far the biggest concern, cited by 67% of chronically tired worriers, was too many demands at work or too many hours of work. A distant second was poor interpersonal relations, followed by threat of layoff or job loss, harassment and/or discrimination, and risk of accident or injury.
- About two-thirds of both chronically tired and other workers reported exposure to air-borne dust and fibres, chemicals or fumes, poor quality air, loud noise or computer display terminals. However, among workers who were exposed, a higher proportion of sleepy workers believed that these workplace conditions had a negative effect on their health.

- Workers who had trouble staying awake reported more health problems – 71% compared with 60% of other workers. They were twice as likely as the rest of the workforce to have been diagnosed with asthma.

## ■ Hiring difficulties in manufacturing

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- The proportion of manufacturers reporting labour shortages as a production impediment rises and falls with the business cycle. According to the quarterly Business Conditions Survey, in early 1995 some 14% of small firms compared with only 3% of larger firms reported a shortage of skilled labour.

## ■ What's new?

---

- *Dynamics of Labour and Income: 1994 Report* released five studies based on the information gathered through the Survey of Labour and Income Dynamics, conducted in January 1993. Some of the studies used data never collected before.
- The Labour Force Survey estimates have recently been revised based on the 1991 Census population counts. Several new products have been developed, including a CD-ROM containing revised monthly and annual averages estimates from 1976 to 1994 at the national and provincial levels.
- A new reference document, *The Bibliographic Employment Equity Database*, makes it easier to find information about employment equity. Entries are restricted to Canadian sources published after 1981 that provide statistical information or data analysis.
- The Analytical Studies Branch examines sources of job growth in two new research papers. *Employment Generation by Small Producers in the Canadian Manufacturing Sector* compares job creation, job destruction, and net job change in small and large manufacturing establishments. *Have Small Firms Created a Disproportionate Share of New Jobs in Canada? A Reassessment of the Facts* addresses various measurement issues and uses a unique longitudinal data set to reassess job creation by firm size.

- In May 1995, the Follow-up of 1990 Graduates Survey interviewed the respondents to the original survey (done in 1992) about their recent labour market experiences.
- Human Resources Development Canada recently completed an extensive evaluation of the unemployment insurance program (UI) to assess its success in achieving its goals, as well as its cost-effectiveness and continued relevance. Over 25 studies focusing on UI's effects on worker and employer behaviour were commissioned.

## ■ Key labour and income facts

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- The "Labour market" indicators in this department (page 41) have been updated to reflect the newly revised Labour Force Survey estimates. The "Alternative measures of unemployment" indicators include the latest 1994 estimates but are unrevised.
- "Major wage settlements" estimates have been updated to 1994. "Earnings of full-time, full-year workers" and "Family income" indicators from the Survey of Consumer Finances are now available for 1993. □

### ***Perspectives on Internet***

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# Families and moonlighting

Henry Pold

**T**ime. We never seem to have enough. Today, with dual-earner families the norm (Chawla, 1992; Charrette, 1995), family time has become even rarer. Adding to the time squeeze for a small but rapidly growing minority of families has been the increasing incidence of multiple jobholding (Chart).

Among employed persons in 1994, almost 5% held a second job, but among families with at least one employed spouse, the incidence of moonlighting<sup>1</sup> (one spouse, or even both, holding two jobs) was nearly 7%, up from 5% in 1984 (Table 1). Spouses in these families must schedule household activities around not only the additional job hours, but the time needed to get to and from the second job.

Who are these harried families? Using family-level estimates from the Labour Force Survey, this analysis divides families into three age groups – 20 to 34, 35 to 49, and 50 and over – based on the age of the reference person<sup>2</sup> and classifies them as to the presence of children.

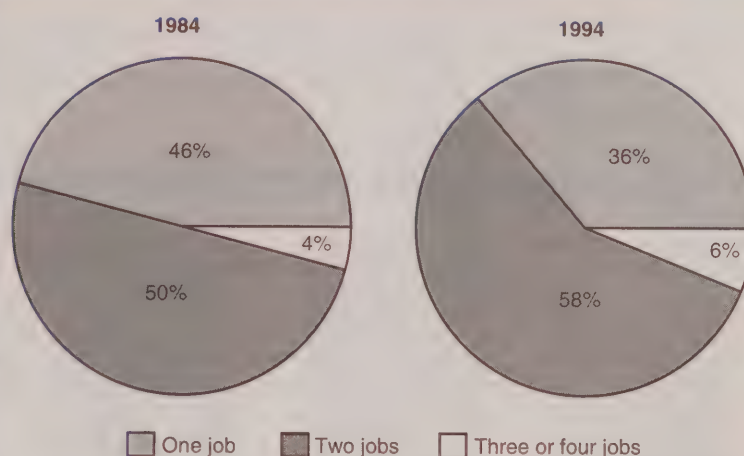
## Impact of children and age

Overall, in 1994 the incidence of moonlighting among families was slightly higher when children were present – 7.0% versus 6.6% – but the rates differed noticeably with the age of the reference person. Among families with the reference person aged 20 to 34, those without children had a higher moonlighting rate (9.1%) than those with children (6.6%). In contrast, moonlighting rates for families headed by older reference persons (35 to 49 and 50 and over) were higher for those with children than for those without children. Among families

*Henry Pold is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-4608.*

Chart

**By 1994, almost two-thirds of husband-wife families\* held two or more jobs.**



Source: Labour Force Survey

\* With at least one employed spouse and not counting other employed family members

with children the highest rate was for the middle age group (7.5%).

Over the ten years, the greatest increase in moonlighting was among young families. Although rates also increased for the other two age groups, the increments were smaller, reflecting the tendency for moonlighting to decline at older ages for families without children.

Moonlighting is usually done by just one spouse. Even so, among the 362,000 families involved in 1994, both spouses in 34,000 of them held two jobs – more than an 80% increase over 1984 when the number was 19,000 out of 241,000. Almost two-thirds of these families had children at home.

## Work and more work

In 1994, 302,000 dual-earner families had at least one moonlighting

spouse. In nearly all of these families at least one spouse was employed full time, and in over half of them both spouses were employed full time (Table 2).

Moonlighting combined with dual full-time employment was highest for the youngest families and lowest for families with a reference person aged 50 or over. Nonetheless, over the last ten years the incidence of moonlighting among families in which both spouses had full-time main jobs increased for all three age groups of families.

## Conclusion

Over the last decade, the number of moonlighting families jumped by more than 50% – reaching 362,000 in 1994. The families most likely to moonlight are young and have no children at home. But regardless of

Table 1  
Incidence of moonlighting families

	Total		With children		Without children	
	1984	1994	1984	1994	1984	1994
%						
Age of reference person						
<b>All ages*</b>	<b>5.0</b>	<b>6.9</b>	<b>5.3</b>	<b>7.0</b>	<b>4.4</b>	<b>6.6</b>
20 to 34	5.2	7.6	5.1	6.6	5.2	9.1
35 to 49	5.8	7.3	5.9	7.5	5.5	6.8
50 or over	3.7	5.3	4.1	6.1	3.3	4.8

Source: Labour Force Survey

\* Includes 15 to 19 year-olds

Table 2  
Moonlighting families

	Two-parent families		With children		Without children	
	1984	1994	1984	1994	1984	1994
'000						
Employment status of spouses						
<b>Total</b>	<b>241</b>	<b>362</b>	<b>173</b>	<b>237</b>	<b>67</b>	<b>125</b>
One spouse employed	60	60	44	40	15	20
Both spouses employed	181	302	129	197	52	105
Both full time at main job	95	166	64	102	31	64
Only one full time at main job	78	125	61	89	17	36
Both part time at main job	8	11	4	6	4	5

Source: Labour Force Survey

the age of the parents or the presence of children, the incidence of moonlighting among families rose over the period. □

### Notes

1 The incidence of moonlighting will always be higher at the family level because the same number of multiple jobholders is divided by a smaller number (there being fewer families than there are individuals).

2 In a given household, one member is designated as the reference person and other members are coded in relation to this person. In a husband-wife family, either spouse may be coded as the reference person.

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# Hours of working couples

Dan Charrette

Among the widely recognized trends in Canadian labour markets are the rise in women's participation rate (making dual earners the majority of husband-wife families), growth in the percentage of women with full-time jobs, and longer hours for more workers. Viewed in isolation, each of these trends has implications for the hours that family members spend on the job, but their overall effect on the proportion of family time devoted to the labour market can only be surmised.

This article brings these trends together by providing a direct measure of the **combined** weekly hours usually worked by dual-earner couples with and without children (see *Data source and definitions*). Do the characteristics of couples who work long hours differ from those of other dual earners? On average, how many hours do husbands and wives in dual-earner families work each week? How does this vary with the age of their children?

## Most couples dual earners

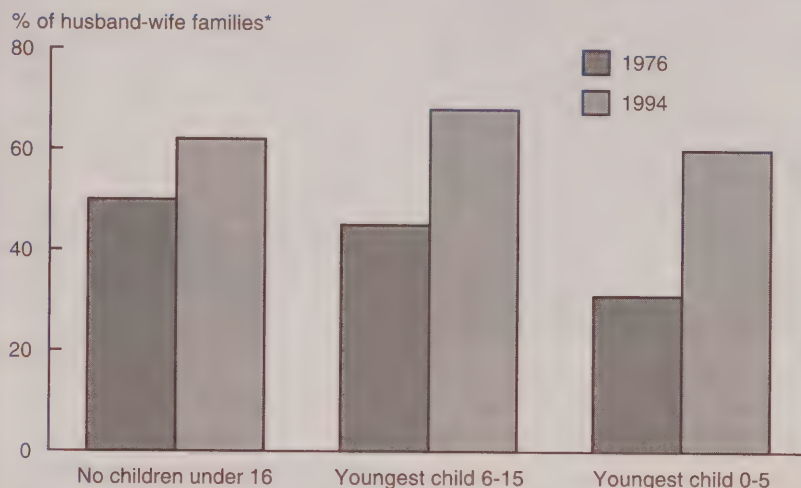
In 1994, families in which both spouses worked outside the home outnumbered those with just one employed spouse: 3.3 million versus 1.9 million. Less than 20 years earlier, most husband-wife families were single earners, especially if they had children of preschool age (five or younger). In fact, in 1976, among families with at least one preschool child, single earners outnumbered dual earners by more than two to one (Chart A).

Most dual-earner couples (more than two-thirds) worked a combined 60 to 89 hours a week in 1994. Another 12% had combined weekly

*Dan Charrette was with the Household Surveys Division. He can now be reached at (604) 666-7072 in our regional office in Vancouver, B.C.*

Chart A

**Regardless of the presence or age of children, the proportions of dual-earner families have increased sharply.**



Source: Labour Force Survey

\* With at least one earner

hours totalling less than 60, while a somewhat larger group (20%) worked 90 or more hours (Chart B).

## Who works long hours?

Certain characteristics of the 665,000 couples working long hours (90 or more per week) set them apart from other dual earners (Table 1). Well-educated wives are more prevalent among families usually working long hours.<sup>1</sup> In 1994, 24% of wives in dual-earner couples working 90 or more hours a week had a university degree; the proportion of degree-holding wives was smaller (about 17%) in couples with shorter combined work weeks.

The relatively large percentage of degree-holding wives among couples working long hours prevailed regardless of the presence of children. Among dual earners working 90 or

more hours a week, the proportion of wives with degrees was 24% in families without children, 23% in those whose youngest child was aged 6 to 15, and slightly higher (26%) in those with at least one child of preschool age. These long hours may reflect the higher proportions of university graduates in professional<sup>2</sup> or managerial positions. Workers with management responsibilities or specialized technical skills are often encouraged, or even required, to put in long hours (Sunter and Morissette, 1994).

## Average combined work week

In 1994, the average combined work week of all dual-earner couples varied only slightly with the presence and age of children: 76.5 hours for those with preschoolers, 78.5 hours



### Data source and definitions

The data in this article are annual averages from Statistics Canada's monthly Labour Force Survey (LFS), a sample survey of about 59,000 households. Information for 1994 is contrasted with 1976, the earliest year for which comparable data are available.

The LFS includes questions on the weekly hours (whether paid or unpaid) individuals usually work at their main job and any other job. "Usual hours" are combined paid and unpaid hours at all jobs for paid workers, the self-employed, and unpaid family workers. For multiple jobholders, respondents who usually work 40 hours per week at their main job and another 15 hours at a second job would have a usual work week of 55 hours.

Common-law relationships are included among husband-wife families.

for couples whose youngest child was aged 6 to 15, and 79.2 hours for those with no children under age 16.

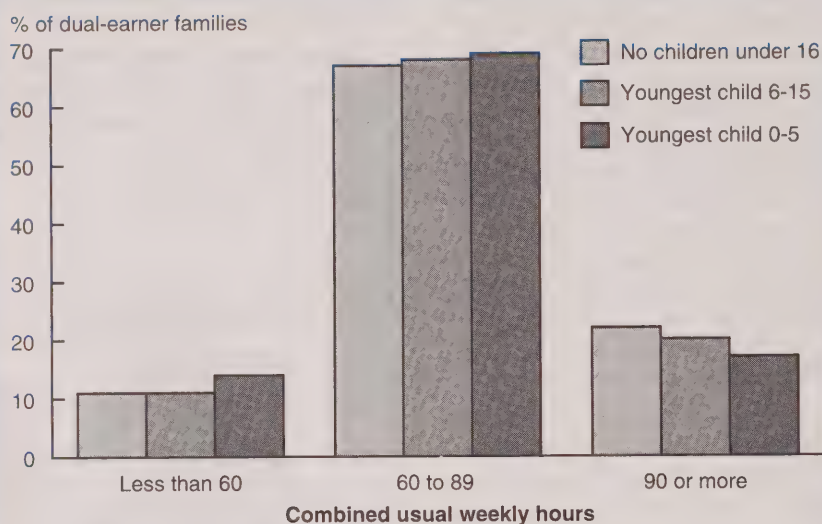
These relatively small differences in combined work weeks were solely attributable to the hours worked by wives. As could be expected, wives with children worked fewer hours outside the home than did those with no children. The latter group averaged 35.6 hours per week. Among mothers whose youngest child was aged 6 to 15, the average declined to 33.6 hours a week, and for those with preschoolers, to 32 hours. Thus, while children no longer have much influence on whether a family has one or two earners, they do play a role in determining hours worked by wives. By contrast, for dual-earner husbands the presence and age of children made almost no difference in work weeks, which averaged 44 to 45 hours.

### Range of hours

The differing effect of children on work patterns is even more evident in the distribution of dual-earner husbands and wives by hours usually worked. In 1994, about a quarter of dual-earner husbands usually worked 50 or more hours a week whether or

Chart B

**In 1994, about 20% of dual-earner couples worked at least 90 hours a week.**



Source: Labour Force Survey

Table 1

**Combined usual weekly hours of dual-earner couples, 1994**

	Combined usual weekly hours			
	Total	Less than 60	60 to 89	90 or more
<b>All dual-earner couples ('000)</b>	<b>3,299</b>	<b>395</b>	<b>2,239</b>	<b>665</b>
<b>Wife with university degree (%)</b>	<b>19</b>	<b>16</b>	<b>17</b>	<b>24</b>
No children under 16 ('000)	1,643	183	1,107	354
Wife with university degree (%)	18	13	17	24
Youngest child 6-15 ('000)	883	101	603	179
Wife with university degree (%)	17	16	16	23
Youngest child 0-5 ('000)	773	111	529	132
Wife with university degree (%)	22	22	20	26

Source: Labour Force Survey

not they had children. Very few dual-earner husbands worked part time (less than 30 hours a week): 5% of those without children, compared with 3% of those with children.

By contrast, the presence of children tended to be associated with part-time work among wives (Marshall, 1994). Whereas 21% of

dual-earner wives without children worked part time, the figure was 30% among those with children at home.

The presence of children did not have as strong an effect on the proportions of wives working long hours: 9% without children had work weeks of 50 hours or more, compared with 6% of those with children.

To a certain extent, however, a wife's work week relates to that of her husband, particularly if he works long hours. In 1994, there were 406,000 dual-earner couples without children in which the husband usually worked 50 or more hours per week (Table 2). Wives in 23% of these couples also had work weeks of 50 or more hours. Although the proportion was not as high for dual-earners with children, the relationship still held. In the 430,000 dual-earner families with children in which the husbands worked 50 or more hours per week, so did 15% of the wives.

## Summary

The past 20 years have seen a strong shift away from families in which one spouse (traditionally the husband) works outside the home and the other spouse manages the household and cares for the children. By 1994, dual-earner families greatly outnumbered single earners. The effect of the presence and age of children on the number of earners in a family has diminished, although these factors still influence the hours worked by dual-earner wives. Such women commonly have hours of work that allow them to juggle job and family, typically a part-time schedule. Nonetheless, in a sizeable number of families, with and without children, both spouses work long hours – especially if they have higher levels of education. □

## Notes

1 The labour force participation rate of women rises with their level of education. For example, among women who had not completed high school, the 1994 participation rate was 34%. For female high school graduates, the rate was 63%, and for those with university degrees, 81%.

Table 2

### Usual weekly hours of dual-earner husbands and wives, 1994

	Usual weekly hours of husband					
	Total	1-29	30-39	40	41-49	50 or more
<b>Couples with no children under 16 ('000)</b>	<b>1,643</b>	<b>87</b>	<b>274</b>	<b>711</b>	<b>165</b>	<b>406</b>
	%					
Usual weekly hours of wife	100	100	100	100	100	100
1-29	21	37	19	20	22	21
30-39	35	31	55	34	36	25
40	29	22	18	38	23	24
41-49	6	--	4	3	13	8
50 or more	9	5	4	4	7	23
<b>Couples with youngest child under 16 ('000)</b>	<b>1,656</b>	<b>45</b>	<b>259</b>	<b>744</b>	<b>179</b>	<b>430</b>
	%					
Usual weekly hours of wife	100	100	100	100	100	100
1-29	30	36	28	29	30	33
30-39	35	35	51	34	34	26
40	25	20	15	31	22	20
41-49	4	--	2	3	9	6
50 or more	6	--	3	3	5	15

Source: Labour Force Survey

2 The professional category comprises natural sciences, engineering and mathematics; social sciences; religion; teaching; medicine and health; and artistic, literary and recreational occupations.

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# Work and low income

Susan Crompton

In recent years, concern about families with low incomes has been heightened by the severity of the last recession, the increasing number of children growing up in these families, and the public policy debate about the effectiveness of current social programs.

Many advocates suggest that employment is the antidote to low income. But most low income families have at least one family member in the workforce. In 1992, two-thirds of working-age low income families worked and their adult members together reported an average of 52 person-weeks of employment; unfortunately, well over half of those weeks were spent doing part-time work. In contrast, virtually all higher income working-age families had work, and they averaged 93 person-weeks of employment, most of it full-time. The issue of low income, then, revolves not simply around work and the wages received for that work, but around the amount of work done – the volume of work.

This article describes the volume of paid work done in 1992 by low income families headed by a person under 65.<sup>1</sup> As such, it provides only a partial analysis of a complex and multi-faceted problem; however, because volume of work is an aspect of low income not often examined, this study should contribute to an understanding of the difficulties faced by low income families.

## Half as much work for LICO families

In 1992, 14% of non-elderly Canadian families, or 892,000, had incomes that fell below the low income cut-offs (LICO). In 66% of these

## Data source and definitions

Data in this study are from the 1993 Survey of Consumer Finances (SCF). The SCF, conducted each year in April or May as a supplement to the monthly Labour Force Survey, collects information about amounts and sources of income received in the previous calendar year, person-weeks worked, and work intensity (whether mostly full- or part-time).

The definition of family used in this article is an economic family, meaning two or more persons living in the same dwelling and related by blood, marriage (includes common law) or adoption. Three types of family are examined: husband-wife with children, female lone-parent with children, and married couple only. Although family types are usually further refined by the number of children (for example, husband-wife with two children), this study bases sub-groups of families on the number of potential workers (persons aged 15 and over). Of course, going to school, caring for children and other responsibilities can keep a person out of the workforce; however, comparing “potential” instead of “actual” resources can be more instructive, since not all families have the same potential for weeks of employment.

families, at least one adult had worked at some time during the year, compared with 98% of all non-LICO families. Low income families were less likely to include potential earners other than the parent(s): just 27% of LICO families, but 36% of non-LICO families, had non-parental adults (most often older children). Having fewer potential contributors to the family's labour pool may have compounded the difficulty low income families had in obtaining employment (see *Data source and definitions*).

Those low income families who did work had less full-time work than

**Volume of work:** the total number of weeks during which family members had a job, whether paid or self-employed. Volume refers to the total person-weeks of work accumulated by all individuals in the family, regardless of the number of contributors.

**Full-time equivalent (FTE):** the total volume of paid work done by the family, whether full-time or part-time, converted to full-time person-weeks of work (see *Calculating total volume of work*)

**Adult, potential earner:** any member of the family aged 15 or over

**Low income cut-off (LICO):** Statistics Canada's low income measure, which sets income limits below which a family usually spends at least 54.7% of its income on food, shelter and clothing. The actual dollar amount of the LICO differs according to the size of the family and the size of its area of residence. (For details, see *Income distributions by size in Canada*, Catalogue 13-207.)

**Full-time, part-time work:** paid employment in which the hours worked per week are mostly 30 hours or more (full-time) or less than 30 (part-time)

other families. Full-time employment accounted for only 45% of the person-weeks worked by LICO families; in other words, they had about 0.8 weeks of full-time for every 1 week of part-time work. Among non-LICO families, full-time jobs accounted for 71% of employment, a ratio of about 2.5 weeks of full-time to every 1 week of part-time work.

When all work done by these families is converted into full-time equivalent (FTE) person-weeks, the joint effect of few weeks of employment and many part-time jobs becomes clear (see *Calculating total volume of work*). In 1992, low in-

*Susan Crompton is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-0178.*



come families did less than half as much paid work as other families – 35 FTE person-weeks versus 77 FTE weeks (Table).

### Two-to-one volume of work ratio

At least one adult worked in 86% of two-parent families with incomes below the LICOs, while virtually all non-LICO two-parent families had at least one employed member. The low income families had as much full-time as part-time work: about 1 person-week of full-time to 1 week of part-time. However, they had about half the volume of work reported by other two-parent families: 43 FTE person-weeks compared with 82 FTE weeks for families with higher incomes (Chart).

Almost half of all female lone-parent families fell below the LICOs in 1992. Only 48% of them had any employed family members that year, while 97% of their non-LICO counterparts had at least one adult in the workforce. Furthermore, those low income families who did work reported less than 0.5 person-weeks of full-time employment to 1 week of part-time. Consequently, the LICO families had less than half as much work as their higher income counterparts: 22 FTE weeks versus 53 FTE weeks for other female lone-parent families.

Fewer than one-tenth of married couples had incomes below the LICOs in 1992. Only 61% of these low income couples had at least one partner working compared with 94% of higher income couples. As with other types of working LICO families, married couples had less full-time than part-time employment, logging less than 0.8 person-weeks of full-time to 1 week of part-time. Consequently, LICO couples had less than half as many full-time equivalent weeks on the job – 33 FTE person-weeks compared with 73 FTE weeks for couples with higher incomes.

### Calculating total volume of work

The volume of work for each family type is expressed as a full-time equivalent (FTE) person-week; that is, the standard unit of measure is a week in which the usual hours worked were mostly full-time (30 hours or more per week).

The FTE is not a precise indicator. Nevertheless, it is useful for comparing the volumes of work done by different types of family. The FTE volume of work is calculated as follows:

1. For each type of family (for example, female lone parents), the total number of person-weeks worked in 1992 by **all** family members aged 15 and over are separated into weeks of mostly full-time work and weeks of mostly part-time work.

2. The number of part-time weeks worked is then converted into the equivalent of full-time weeks. The average weekly hours worked in 1992 by part-timers (15.7 hours) was 37% of that worked by full-timers (42.1 hours), which is rounded up to 40% for the sake of simplicity. The full-time equivalency is then calculated by multiplying the number of part-time weeks by 0.4; thus, 20 weeks of mostly part-time work is equivalent to 8 weeks of full-time work.

3. Actual full-time weeks are added to the converted part-time weeks to obtain the total number of full-time equivalent (FTE) person-weeks.

4. **Average** FTE person-weeks worked per family are then calculated for each type of family.

Table  
Full-time equivalent (FTE)\* work for families with at least one employed adult, 1992

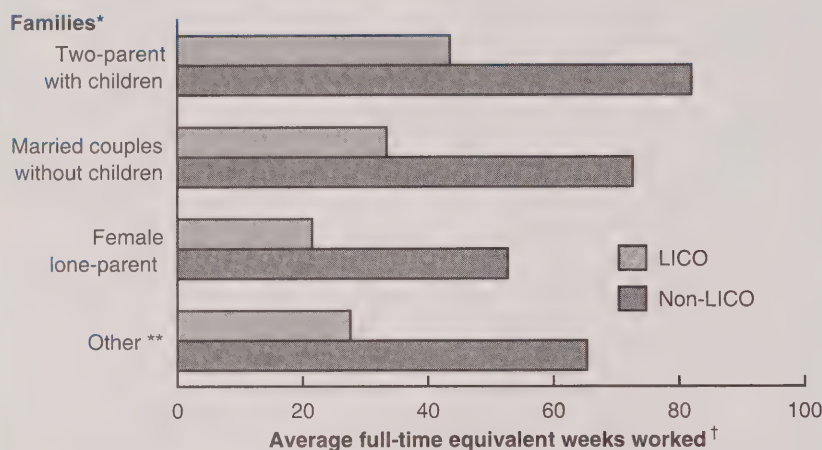
	Number of families with employment			Average number of FTE weeks per family		
	Total	LICO	Non-LICO	Total	LICO	Non-LICO
	'000					
<b>All families with employment</b>	<b>5,891</b>	<b>586</b>	<b>5,305</b>	<b>73</b>	<b>35</b>	<b>77</b>
Married couples only	1,425	81	1,344	70	33	73
Two-parent families with children	3,647	306	3,341	79	43	82
Two adults	1,924	196	1,728	68	39	71
Three adults	976	53	922	82	46	84
Four or more adults	748	57	691	103	57	107
Female lone-parent families	476	157	319	42	22	53
One adult	216	88	128	34	21	42
Two or more adults	260	69	191	50	22	60
All other families**	343	42	301	61	28	65

Source: Survey of Consumer Finances

\* Total volume of paid work done by the family, whether full- or part-time, converted to full-time person-weeks of work

\*\* Includes male lone-parent families, married couples with other relatives and all other types of economic family

Chart

**Regardless of family type, low-income (LICO) families worked less in 1992.**

Source: Survey of Consumer Finances

\* With at least one employed adult

\*\* Male lone-parent families, married couples with other relatives, and other types of economic families

† See Data source and definitions

**More potential earners add little**

Just under half (47%) of families with children – two-parent and female lone-parent – included one or more potential earners in addition to the parent(s). In most cases, these “extra earners” were children aged 15 or over.

Among low income families, the likelihood that at least one family member had been employed during the year rose with the number of adults in the home. However, the effect of more potential earners on the volume of work was much less than

that in higher income families. For female lone-parent families, in particular, the impact was negligible, adding 1 FTE person-week, compared with 18 FTE weeks for their non-LICO counterparts (Table).

**Summary**

Only two-thirds of low income families reported some employment in 1992, compared with virtually all families with higher incomes. Among low income families who did work, most could not stitch together the equivalent of one full year of full-time work (49 to 52 weeks of full-

time employment); two-parent families came closest, with an average of 43 person-weeks of full-time work. In contrast, almost all higher income families had over a full year's work, and recorded over twice the volume of work of low income families. Even the presence of other potential earners in a low income home (that is, a working-age family member other than a parent) did not contribute as much to the family's total volume of work as additional adults in families that were not economically disadvantaged.

**Update**

Data for 1993, available just before press time, tell the same story as the 1992 data. Almost two-thirds (65%) of LICO families had at least one employed member at some time during the year; however, over half (53%) of the employment was part-time. Consequently, low-income families had less than half the volume of work obtained by higher income families, at only 34 FTE person-weeks compared with 77 FTE weeks. The average FTE person-weeks worked by the three different types of family in 1993 were virtually the same as the year before.

□

**Note**

1 Given the extremely low rate of labour force participation among elderly families, earnings from employment are not usually an important determinant of income.



# Work experience

Heather Lathe and Philip Giles\*

Education and experience – the keys to getting and keeping a job. Both factors affect not only an individual's employability and remuneration, but also, at the aggregate level, the productivity of the labour force. But while extensive information about educational attainment has long been available, data on work experience have been sketchy at best. The Survey of Labour and Income Dynamics (SLID) (see *Data source*) fills this gap by comparing the lifetime work experience of Canadians aged 15 to 69. What are the differences between men and women, people of different ages, in different fields of work and with different levels of education?

## Age

Overall, persons aged 15 to 69 in 1993 had an average of 13.6 years of full-year full-time equivalent (FYFTE) experience. However, as might be expected, work experience increases substantially with age (see *Sizing up experience and education*). In 1993, 20 to 24 year-olds had worked an average of 1.8 FYFTE years. People aged 60 to 64 had 27.0 years, representing close to 60% of their adult years. Average experience of the whole population may increase over time with the current aging of the population, which is slowly raising the average age of people still in their working years.

In the population aged 15 to 69, 26% had worked the equivalent of more than 20 years (Table 1). Almost 40% had between 6 and 20 years' experience, while a smaller proportion (16%) had worked 5 FYFTE

## Data source

The Survey of Labour and Income Dynamics (SLID) is a new longitudinal survey that, like its predecessor, the Labour Market Activity Survey, is designed to monitor individuals' labour market experiences. However, to get a full picture of economic well-being, it also asks about income, using categories similar to those used by the Survey of Consumer Finances. SLID also contains some unique retrospective information. One such topic is how long individuals have worked, either full time or part time.

Since its preliminary interview in January 1993, SLID has conducted annual cycles of labour and income interviews with some 31,000 individuals across the country. In all, six years of labour and income data will be collected for each panel of the study. A new panel will enter the survey in January 1996, overlapping with the first until the former finishes in 1999, when the third panel will also begin. The cycle of overlapping panels will continue indefinitely.

## Sizing up experience and education

Work history begins with the respondent's first full-time paid job. Previous work, such as part-time or summer jobs while in school, is not included because respondents might have difficulty recalling such information. It might also pose a challenge for respondents reporting on behalf of other household members. Consequently, SLID does not measure the part-time experience of the 15% of men and 23% of women who never worked full time. The effect of this exclusion is not as great as it would be if part-time jobs had always had the same share of employment as they do now.<sup>1</sup>

The survey asks respondents how many years they worked at least 6 months (recorded as full years) or not at all. The remaining years are recorded as part years worked. For years during which they worked 6 months or more, respondents are asked whether they worked full time, part time, or both, at different times during the year. Full time is defined as 30 hours or more a week.

To arrive at full-year full-time equivalents (FYFTE), each year of work history is valued as follows:

	FYFTE
Full year, full time (6 months or more, 30 hours per week or more)	1
Full year, part time (6 months or more, under 30 hours per week)	0.5
Full year, some full time/some part time	0.5
Part year (less than 6 months), whether full or part time	0.25

For example, someone who worked 6 years full time for at least 6 months each year, plus 5 years full time but less than 6 months each year, plus 4 years part time for at least 6 months each year, would have 9.25 years' experience:  $(6 \times 1) + (5 \times 0.25) + (4 \times 0.5)$ .

SLID's educational attainment variable has 15 categories, ranging from "never attended school" to "doctorate." The variable on years of schooling is derived from questions on number of years completed in three categories: elementary and high school; community college or CEGEP, technical institute, trade or vocational school (that is, non-university postsecondary); and university.<sup>2</sup>

\* Adapted from an article in *Dynamics of Labour and Income: 1994 Report*. (Catalogue 75-201E). Heather Lathe is with the Household Surveys Division. She can be reached at (613) 951-4353. Philip Giles, also with the Household Surveys Division, can be reached at (613) 951-2891.



years or less. Approximately one in five working-age adults had never worked full time (excluding summer jobs while still students).

### The male-female experience gap

The average work experience of men in 1993 was 17.1 years, compared with 10.1 years for women (Chart).

Young women had almost the same experience as their male counterparts, but at successively older ages the experience gap grew. Starting at ages 55 to 59, the average experience of men was at least double that of women. For example, men aged 60 to 64 averaged 22 years more experience than women.

Table 1  
Work experience of 15 to 69 year-olds, 1993

	Both sexes	Men	Women
	%		
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
Never worked full time	19	15	23
With at least some full-time experience	81	85	77
Only full-year full-time	58	69	46
Some part-year or part-time*	23	16	31
Years of experience**			
5 or less	16	12	20
6-10	15	12	18
11-15	13	12	13
16-20	12	13	11
21-25	8	9	6
26-30	6	7	4
Over 30	12	20	5

Source: Survey of Labour and Income Dynamics

\* Includes years with a mixture of full- and part-time work

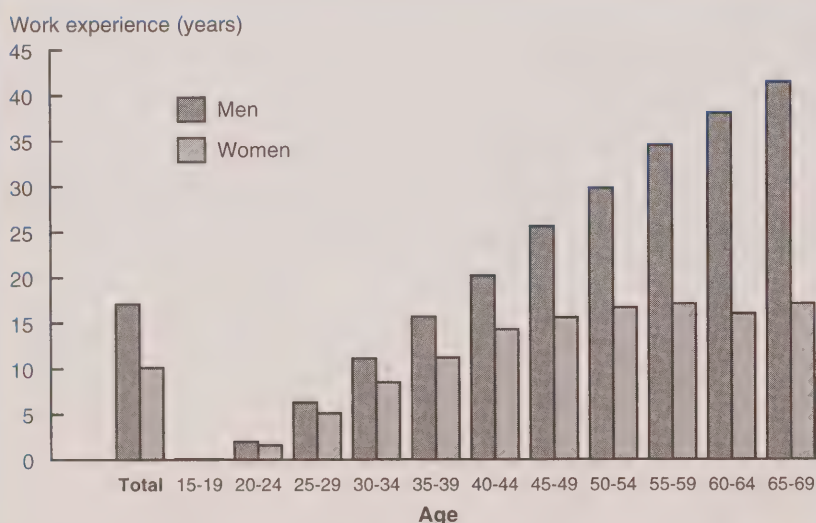
\*\* Full-year full-time equivalent; see Sizing up experience and education

Parenting often interrupts women's participation in the labour force. The paid work experience of women aged 45 and over who had had or raised children was 15.4 years, compared with 26.5 for those who had not (Table 2).

Labour force<sup>3</sup> participation patterns, however, have changed considerably over the past few decades. By 1993, women's participation rate was 57.5%, up from 23.4% in 1953. Over the same period, men's participation fell from 82.9% to 73.3%. Older women are participating more in the workforce than before, but women aged 25 to 54 have made the greatest contribution (Basset, 1994).

Chart

Over age 55, men have at least twice as much work experience as women.



Source: Survey of Labour and Income Dynamics, 1993

Table 2  
Years of work experience, 1993

	Average	
	Years of experience*	Age
<b>Both sexes aged 15-69</b>	<b>13.6</b>	<b>38.3</b>
Men	17.1	38.2
Women	10.1	38.5
<b>Under 45</b>		
Men	9.6	29.9
Women	6.9	29.7
<b>45 and over</b>		
Men	32.7	55.4
Women	16.5	56.2
Had or raised children	15.4	56.1
Without children	26.5	56.9

Source: Survey of Labour and Income Dynamics

\* Full-year full-time equivalent; see Sizing up experience and education

Eventually, women's average experience will approach that of men, as the younger generation's work patterns replace those of the older generation, but this will happen slowly. New trends in work patterns could also narrow the gap – for example, earlier retirement among men, and men leaving paid work for parenting.<sup>4</sup>

### Full- and part-time work

Eight in ten adults aged 15 to 69 had some full-time work history and therefore some work experience as defined by the survey. On average, they had worked at least part of the year for 18 years (Table 3), with only two of those years being either part-time or for less than 6 months. For just those adults with some part-time experience complementing their full-time work history (29% of those with some full-time experience), full-time employment was still more important than other work; of an average of 17 years worked, almost 10 were full-year full-time.

### Occupations and industries

The work experience of people in specific occupations or industries may reflect the sets of skills required to obtain jobs in those occupations or industries, although part of their experience may have been acquired elsewhere. For example, managerial and administrative occupations tend

to be "high" experience, while clerical, sales and service occupations tend to be "low" (Table 4). The experience of employees in the three service industries is also low. Lower experience, however, may reflect fields that have grown more in recent decades; for example, service industries compared with goods-producing industries. Some traditional industries, such as agriculture, other primary, and to a lesser extent, manufacturing, have workers with higher-than-average experience.

### Level of education

People with higher levels of education have more experience relative to their "potential" than those with lower levels of attainment. An estimate of time *not* spent in school, "potential" experience, was computed as: age minus years of schooling minus five years (see *Mincer's measure*). This measure takes into account the extra time to acquire education.

The average difference between potential and actual work experience was 2 to 3 years for respondents with any university education and 5 to 8 years for those with any non-university postsecondary education or graduation from high school. The minor difference between potential and actual experience for people with a master's degree or higher – under 2

Table 4  
Work experience, by occupation and industry, 1993

	Average years *
<b>Occupation</b>	
Religion	24.6
Mining	20.6
Transport equipment operating	18.5
Managerial and administrative	17.9
Machining	17.1
Construction	16.9
Farming	16.6
Product fabricating	16.4
Other crafts and equipment operating	16.2
Forestry	15.9
Processing	15.8
Fishing	14.5
Teaching	14.0
Natural science, engineering and mathematics	13.0
Medicine and health	12.5
Sales	12.0
Clerical	11.7
Social science	11.6
Material handling	11.1
Service	9.9
Artistic, literary and recreational	9.2
<b>Industry</b>	
Transportation and storage	18.7
Agriculture	17.9
Other primary **	16.9
Other utilities	16.8
Manufacturing	16.5
Government service	16.1
Construction	15.7
Finance, insurance and real estate	15.2
Communication	14.6
Community service ***	12.9
Trade	11.7
Miscellaneous service †	11.6
Business and personal service ††	9.9

Source: Survey of Labour and Income Dynamics

\* Full-year full-time equivalent; see Sizing up experience and education

\*\* Fishing, forestry and mining

\*\*\* Educational services, health and social services, religious organizations, and amusement and recreational services

† Membership organizations, excluding religious organizations, and other services

†† Business services, personal and household services, and accommodation, food and beverage services

Table 3  
Full- and part-time work experience, 1993

	Total	Full-year full-time	Part-year or part-time *	Full-year full-time equivalent**
Average years				
<b>Population aged 15-69</b>	<b>14.5</b>	<b>12.9</b>	<b>1.7</b>	<b>13.6</b>
With at least some full-time experience	17.9	15.9	2.1	16.8
Only full-year full-time	18.4	18.4	...	18.4
Some part-year or part-time*	16.7	9.5	7.2	12.9

Source: Survey of Labour and Income Dynamics

\* Includes years with a mixture of full- and part-time work

\*\* See Sizing up experience and education



### Mincer's measure

When survey data are unavailable, proxy estimates of experience based on age and education are sometimes used. Jacob Mincer (1974) suggested such a measure: "potential" experience defined as age minus years of schooling minus a constant equal to the preschool years (five). A negative result is possible if the individual began working full time and continued or resumed studies while working. The gap between potential and actual work experience is narrow for a much higher proportion of men than women. For example, in 1993, the gap for 33% of men was one to two years, whereas this was the case for 21% of women. On the other hand, 22% of women had a gap of at least 20 years, compared with just 4% of men.

The approximation of work experience with potential experience would appear reasonably good for men. However, the relatively flat distribution for women – which reflects the diversity of women's experience even within age

groups – illustrates the likely inadequacy of any simple measure based on age and years of schooling to approximate their actual experience.<sup>5</sup>

### Potential minus actual work experience of 15 to 69 year-olds, 1993

	Men	Women
	%	
<b>Difference (years)</b>	<b>100</b>	<b>100</b>
40 and over	1	7
20 to 39	3	15
10 to 19	7	17
5 to 9	13	15
3 to 4	16	10
1 to 2	33	21
0	14	10
-1 to -2	10	5
-3 and less	4	2

Source: Survey of Labour and Income Dynamics

Note: Totals may not add due to rounding

years – may reflect not only fairly steady careers upon completing school, but a higher occurrence of full-time work before they finished their qualifications.

In contrast, the gap between potential and actual work experience was wide for people with less than 9 years of schooling – an average of 19 years or more in each lower attainment category. This may reflect higher unemployment rates in addition to lower participation rates, although it results partly from the overestimate of potential experience for people who left school when they were very young. Also, people in each of these attainment categories are roughly 10 years older than those with higher levels of education. Nevertheless, across the whole range of qualifications, people with higher levels of education come closer to fulfilling their potential work experience defined this way

than do people with lower educational attainment.

### Summary

In 1993, the average experience of all adults aged 15 to 69 was 13.6 years (summarized in full-year full-time equivalents); for those currently in the labour force it was 14.5 years. These figures will rise in the future with the "greying" of the labour force.

As might be expected, work experience tends to increase with age. There are also substantial differences between the work experience of men and women, largely reflecting the impact that having children used to have on women's labour force participation. As well, work experience varies by industry and occupation. And although people with higher levels of educational attainment gener-

ally start their careers later, the gap between their potential and actual work experience is narrower than that among people with less education. □

### Notes

1 Only observations with valid answers to all work history questions were used in the analysis. The proportion of remaining observations – those with unknown or invalid answers to the composite work experience variable – was fairly high at 13.7%. In completing the paper questionnaire, interviewers may have mistakenly left the first question on work history blank if the respondent reported never having worked full time, rather than checking the appropriate box. This oversight would have resulted in all remaining work history questions being coded zero. A pattern in the characteristics of omitted respondents supports this explanation; for example, this group contained slightly higher proportions of women, older people, and people not in the labour force. However, overall results are not likely to be affected significantly. Computer-assisted interviewing introduced in January 1994 should eliminate this problem.

2 For some respondents the values for both years of schooling and experience were very high, resulting in an apparent overlap of work and formal education by at least 10 years. While such cases are plausible, they may obscure results for the general population. There were 32 respondents for whom the overlap of school and work was at least 10 years and who had not achieved a doctorate; these cases were deleted from all analyses in this study.

3 Labour Force Survey data prior to 1966 refer to persons aged 14 and over; thereafter, persons 15 and over were surveyed.

4 The average experience of people aged 15 to 69 in the labour force, that is, people working or looking for work, was 14.5 years, compared with 11.6 years for those not in the labour force (whose average age was 4.6 years older). For women – though not men – the effect of excluding those not in the labour force is substantial: it adds from about 1 extra year of experience for women in their thirties to 6 extra years for women aged 60 to 64.

5 While Mincer's proxy is still used, other indirect measures have been developed to better reflect women's labour force participation (see Kidd and Shannon, 1994).

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## Perspectives on Labour and Income

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# Pension plan potpourri

Hubert Frenken

Nearly half the employees in Canada are covered by employer-sponsored registered pension plans (RPPs), but the benefits provided by these plans are far from homogeneous. RPPs come in a bewildering variety of forms and yield widely different benefits to the members upon retirement.

This article outlines the variety that exists in RPPs and indicates the number of workers covered by each type of plan.<sup>1</sup> Unlike Canada and Quebec Pension Plan (C/QPP) benefits, which depend only on the member's contributory period and earnings during that period, RPP pensions are linked to any of the following: contributions, length of participation, earnings, and, particularly, the benefit formula. Some RPP members accumulate thousands of dollars in pension credits each year; others earn only small amounts.

The article shows how benefits can vary for hypothetical workers earning identical annual wages (\$40,000 at retirement), retiring at the same age (60) and having the same service (20 years), but whose pension plans have different benefit formulas. The article also looks at the costs of plans with different formulas, identifies the plans most likely to require employee contributions and describes some characteristics of workers likely to have substantial pensions.

The calculations are kept as simple as possible. For each formula, only the most common example is presented. No consideration is given to possible pension savings with previous employers. Nor is the scope of ancillary benefits provided by many plans addressed (spousal pensions, early retirement options, benefit indexing, past service benefits and spe-

cial supplements in case of retirement before age 65).

## Two basic formulas

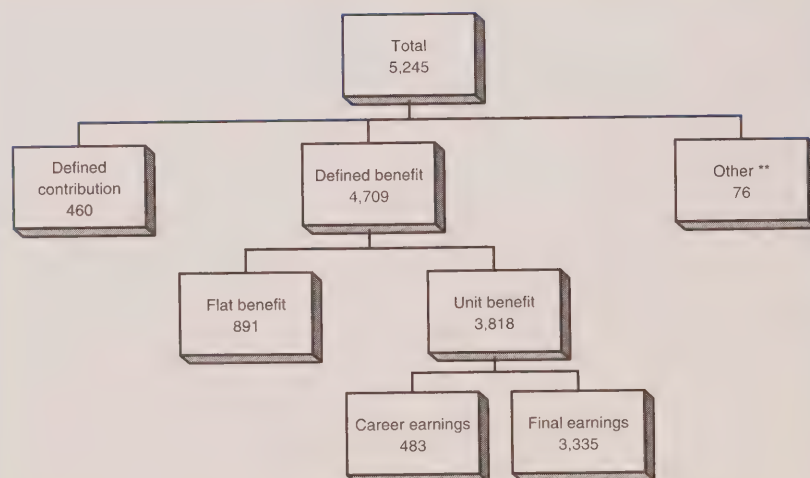
RPPs fall into two distinct groups: defined contribution plans and defined benefit plans (Figure 1). The former, similar to any savings plan, are called defined contribution because they specify an employer contribution rate but not a benefit formula. Employer payments and any employee contributions accumulate, earn investment income and provide a monthly pension at retirement. A typical contribution might be 5% of the employee's earnings provided by both employer and employee. Defined contribution plans represent 55% of all RPPs, but account for a relatively small share of RPP members: in 1993, just 9% of the 5.2 million RPP participants (Table 1).<sup>2</sup>

In contrast, defined benefit plans usually do not prescribe how much the employer must contribute, but always specify the amount of pension retiring members will receive. Employers contribute as needed to ensure that funds are available to cover expected retirement benefits (to maintain the actuarial soundness of the plan).<sup>3</sup> Defined benefit provisions have one advantage over defined contribution plans: the benefit formulas allow a more accurate calculation of members' pensions.

## Different defined benefit formulas

Defined benefit plans have either a flat benefit or a unit benefit formula. Flat benefit arrangements specify a fixed monthly pension per year of service; for example, \$20 per month for each year of service. Unrelated to earnings, flat benefits depend only on

Figure 1  
Membership\* in employer-sponsored pension plans, 1993



\* In thousands

\*\* Combination of defined contribution and defined benefit, or variable formula for different categories of members

Hubert Frenken is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-7569.

**Table 1**  
**Employer-sponsored pension plan membership, 1993**

	Both sexes		Men		Women	
	'000	%	'000	%	'000	%
<b>All plans</b>	<b>5,245</b>	<b>100</b>	<b>3,025</b>	<b>100</b>	<b>2,220</b>	<b>100</b>
Defined contribution	460	9	284	9	176	8
Defined benefit	4,709	90	2,691	89	2,018	91
Flat benefit	891	17	737	24	155	7
Based on career earnings *	483	9	295	10	188	8
Based on earnings in final years **	3,335	64	1,660	55	1,675	75
3 years	343	7	211	7	132	6
4 years	12	-	7	-	5	-
5 years	2,505	48	1,136	38	1,369	62
6 or more years	476	9	306	10	170	8
Other †	76	1	50	2	26	1

Source: Pension plans in Canada database

\* May periodically be updated to take into account only recent years, rather than all years of plan participation

\*\* Final average and average best earnings

† Combination of defined contribution and defined benefit, or different formulas for various categories of members

the length of plan participation. In 1993, 19% of defined benefit plan members were covered by such formulas.

The majority (81%) were in unit benefit plans, which provide a "unit" of pension equal to a percentage of their earnings for each year of participation. The earnings on which the pension is calculated vary significantly. Some plans use career earnings, which encompass the earnings received during all the years of participation in the RPP. Others use final earnings, which refer to those near retirement only.

For this article, final average and average best formulas have been combined. Final average earnings suggests the average of earnings received during a specified period just before retirement, and average best, the average of those in the member's highest-earnings period. For most workers the highest-earning period is just before retirement.

## How much pension?

For members of defined contribution arrangements – also called money

purchase plans since the accumulated funds are used to purchase an annuity from a financial institution – only an approximate pension can be calculated. The benefit depends on the accumulated funds, the member's age at retirement, the type of annuity purchased and the prevailing interest rates at retirement.

### Some relatively low ...

Generally, defined contribution pensions are small. Contributions are usually a percentage of earnings, so only high income members with significant combined employer and personal contributions earn generous pension credits.<sup>4</sup> Many long-term members would likely have had low contributions during their early years, resulting in modest pension savings during those years.

Based on assumed salary increases and interest rates during the years of plan participation, as well as standard life tables and current annuity rates, a defined contribution pension can be calculated for a hypothetical worker (see *About the data*). A non-indexed pension for someone aged 60, retiring in 1995, with a final salary of

\$40,000 and 20 years of combined employee and employer contributions of 10% of earnings, might be about \$10,500 annually (\$875 per month) for a man and \$9,600 (\$800 per month) for a woman.<sup>5</sup> If indexed (adjusted annually to reflect changes in the consumer price index), the former pension would start at approximately \$7,200 per year (\$600 monthly) and the latter at about \$6,100 (\$510 monthly).

Flat benefit plans also tend to produce relatively small pensions. The most common benefit rates are \$20 and \$30 a month for each year of service, although rates range from less than \$5 a month to as high as \$75 (Table 2). At the \$20 rate, a worker with 20 years of service, regardless of earnings, would have an annual pension of just \$4,800, and \$7,200 at the \$30 rate (\$400 and \$600 per month, respectively).

### ... others higher

In general, pension accruals are higher under unit benefit plans than under defined contribution and flat benefit plans. But even unit benefit accumulations can vary significantly.



**Table 2**  
**Flat and unit benefit plan membership, by benefit rates, 1993**

	Members	
	'000	%
Flat benefit rate per month for each year of service		
<b>Total</b>	<b>891</b>	<b>100</b>
Less than \$10.00	48	5
\$10.00 - \$19.99	92	10
\$20.00 - \$29.99	200	22
\$30.00 - \$39.99	209	23
\$40.00 or more	35	4
Other *	308	35
Unit benefit rate as % of earnings **		
<b>Total</b>	<b>3,818</b>	<b>100</b>
Less than 1.5%	205	5
1.5% - 1.9%	506	13
2.0%	2,911	76
More than 2.0%	113	3
Other †	82	2

Source: *Pension plans in Canada database*

\* Variable rate for different categories of members or fixed dollar pension after a minimum period of service

\*\* Ignores any lowering of benefits because of integration with the C/QPP (see C/QPP integration)

† Variable rate for different categories of members

In career average plans, for example, low earnings at the beginning of a career would bring down the average used to calculate pensions. Because of that, many employers periodically adjust the earnings base to more recent earnings only; for instance, earnings since the beginning of January, 1988. It is not known how many members benefit from such adjustments.

## About the data

### Source

This article uses the Pension Plans in Canada database, maintained by the Labour Division of Statistics Canada. This database is updated annually with information from the federal and provincial agencies responsible for supervision and regulation of employer-sponsored pension plans (RPPs). Annual data reflect the number of active plans and their characteristics as of January 1 each year. The information in this article is for 1993.

Records for each RPP provide detailed classifications of contribution and benefit formulas, including the existence and nature of any linkage with Canada and Quebec Pension Plan (C/QPP) contributions and benefits. For further details, consult the Statistics Canada biennial reports and supplements, *Pension Plans in Canada*, Catalogue 74-401 or contact the Pensions Section, Labour Division, Statistics Canada, (613) 951-4034.

Pensions based on earnings near retirement are usually higher than those based on earlier earnings, particularly if the earnings base is a short period. The most common period is the last five years (66% of unit benefit plan members). In comparison, 13% have a career average earnings base and 9% have one based on the last three years before retirement (the shortest period permitted).

Just as benefit rates for flat benefit plans differ, so do those for unit benefit plans. Some members are entitled to less than 1% of earnings for each year of service, while others receive more than 2% (Table 2). Most receive 2% (76% of all unit benefit plan members). Predictably, members entitled to 2% or more of final earnings collect the most generous pensions (assuming a significant number of years of service). For a worker retiring in 1995 after 20 years of service and with a \$40,000 final year salary, the annual pension would be about \$10,250 (\$850 per month) with a 2%

### Methodology

To calculate the pensions produced by the different formulas for 60 year-olds retiring in 1995 with 20 years of service and \$40,000 final year salary, it was assumed that earnings were a constant proportion of each year's maximum pensionable earnings (YMPE) of the C/QPP. For example, the average earnings for the final five years in the final earnings arrangement were 115% of the average 1991-to-1995 YMPE (the ratio of the \$40,000 final salary to the 1995 YMPE).

For defined contribution benefits, interest during the accumulation period was assumed to average 7.5% per year, while the annuities for a non-indexed pension were based on 9.5% net interest for 15 years and 6% thereafter, and for an indexed pension, 4.5% for 15 years and 3% thereafter (see *Acknowledgements*).

unadjusted career earnings formula. Under a 2% final five-year earnings provision, the same worker would receive approximately \$15,250 (\$1,270 per month).

Many 2% final earnings pensions are integrated with C/QPP benefits, however, resulting in lower benefits after the pensioner reaches 65. This integration can take different forms and is usually accompanied by integration of contributions (see *C/QPP integration*).

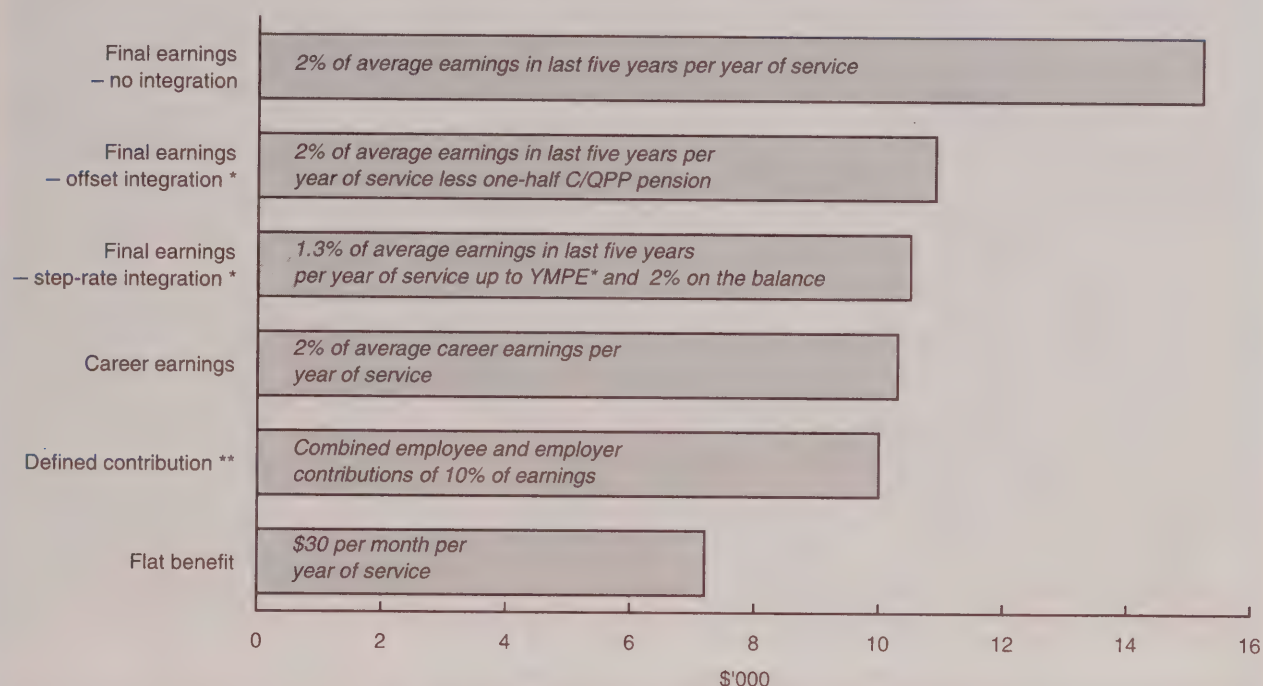
Nevertheless, final earnings plans tend to provide the highest pensions, followed by career earnings plans, defined contribution plans and, finally, flat benefit plans (Figure 2).

## Contribution differences

The higher the pension the greater the contributions required. Although many other factors have an impact, differences in the retirement pensions provided under the various formulas are reflected in the range of average

Figure 2  
Annual pension produced by different benefit formulas

Retirement in 1995 with 20 years of service and \$40,000 final-year salary



\* See C/QPP integration for definitions

\*\* Non-indexed median pension for men and women

contributions per active member of each type of plan.<sup>6</sup> In 1992, nearly \$20 billion in combined employer/employee contributions was deposited into RPP funds, \$3,750 for each of the 5.2 million active members. The per capita contribution ranged from \$4,700 for final earnings plans, to \$2,600 for career earnings plans, \$2,160 for defined contribution plans and \$1,760 for flat benefit arrangements (Chart A).

### Who must contribute?

Participating in a relatively generous pension plan often comes at a price. Members of these plans are more likely to share the costs of their pension accruals than members of other plans. For example, 38% of the total contributions to final earnings plans were made by the members themselves, while the employee share of flat benefit deposits was only 10%.

Three out of four RPP members overall had to contribute in 1993, but their contribution rates varied widely. Some contributed a certain number of cents per hour worked; others, a fixed dollar amount per year. The majority (92% of contributors), however, had a fixed percentage taken from their salaries, ranging from less than 5% to more than 8%. The most common rate was between 7% and 7.9% (Chart B).

Nearly nine out of ten final earnings plan members were obliged to contribute to their RPP in 1993, and almost two-thirds of them contributed 7% or more of their earnings. At the other end of the spectrum, 18% of flat benefit plan members had to contribute and none at such a high level. Nearly 78% of defined contribution plan members and 71% of those in career earnings plans had mandatory

contributions. The most common rate was 5% of earnings, and very few contributed over 7%.

RPP members with ample benefit accruals generally bear a significant share of the costs, while those with much lower pension savings tend to make no or very limited personal contributions.

### Who earns generous pensions?

#### Differences by size of employer

Small and medium-sized employers are much less likely than large organizations to sponsor a pension plan for their workers (Morissette, 1991, and Frenken and Maser, 1992). And, if they do, they are more apt to have a defined contribution plan. In 1993, two-thirds of the members in plans



## C/QPP integration

Many RPPs have benefit formulas linked to or integrated with the C/QPP, especially plans paying a unit of benefit based on career or final earnings. Integration can take two forms: benefit offset or benefit step rate.

### RPP members with C/QPP integration of benefits based on percentage of earnings, 1993

	Members	
	'000	%
<b>Total</b>	<b>3,735</b>	<b>100</b>
Offset integration	791	21
Step-rate integration	2,510	67
No integration	434	12

Source: Pension plans in Canada database

A benefit offset reduces the pension by all or part of the C/QPP benefit. For example, the hypothetical member with 20 years of service and \$40,000 in final earnings, retiring in 1995 with an offset of one-half the C/QPP pension from the 2% of final earnings, would receive an annual RPP benefit of about \$10,950 (\$15,250 minus an offset of approximately \$4,300), or \$910 per month.

Step-rate integration is more common. A benefit step-rate formula uses two rates: a lower rate applied to earnings up to the C/QPP year's maximum pensionable earnings (YMPE) (\$34,900 in 1995) and a higher one above that level. The final earnings plan member with \$40,000 final salary and 20 years of service retiring in 1995 would receive an annual benefit of about \$10,550 (\$880 per month), based on a two-tiered formula of 1.3% and 2%.

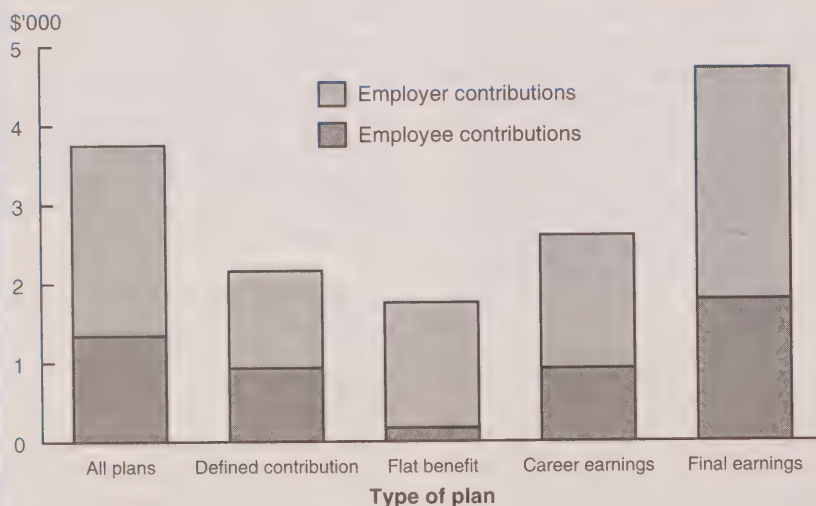
Many RPP members with C/QPP benefit integration can retire at age 60, or even sooner, with the pension they have accrued. Furthermore, they are often paid a supplementary benefit from the time of retirement to age 65. This supplement (also called bridging benefit) may consist

of payment of the full pension, without the C/QPP reduction. For example, someone with an RPP benefit of 2% of earnings for each year of service less C/QPP benefits, would have the C/QPP offset applied only at age 65. And someone with an RPP step-rate formula of 1.3% for each year of service up to the YMPE and 2% on the balance of earnings would receive 2% of all earnings until age 65. The lower rate on earnings up to the YMPE would be applied only at that age.<sup>7</sup>

Most plans with an integrated benefit formula also have integrated contributions. Of the 3.8 million RPP members who were required to contribute in 1993, 78% had contributions integrated with the C/QPP. More than three-quarters of them had a contribution step-rate formula (for example, 4.5% of earnings up to the YMPE and 7% on the balance of earnings); the remainder had contribution offsets (for example, 7% of earnings less the required C/QPP contributions). For further details on contribution integration and analysis of formula changes in recent years, see Frenken, 1993.

Chart A

**Per capita contributions were greatest for final earnings plans in 1992.**



Source: Pension plans in Canada database

with fewer than 50 participants had a defined contribution arrangement.<sup>8</sup> At the other end of the spectrum, more than three-quarters of members in plans with 5,000 or more participants had a final earnings formula.<sup>9</sup>

### Variations by industry

Specific RPP arrangements tend to be associated with particular industries. Although only 9% of all RPP members had defined contribution arrangements in 1993, the proportion was 20% in both primary industries and trade (Table 3).

Flat benefit formulas predominate in construction. In 1993, almost nine out of ten construction industry workers covered by an RPP had such an arrangement. Flat benefit formulas were also common in some manufacturing industries, notably clothing, wood products and transportation equipment, where 70% of covered workers had such a formula. In these industries pension plans are usually

Chart B

**Three-quarters of plan members had to contribute in 1993.**

Source: Pension plans in Canada database

\* Contributions of a specified number of cents per hour worked, a fixed dollar amount per year, or a variable rate for different categories of members

\*\* Ignores any lowering of contributions because of C/QPP integration

union-negotiated and restricted to members of the union.<sup>10</sup>

In contrast, nearly all employees in public administration and defence belonging to a pension plan and most RPP members in finance, insurance and real estate; in transportation, communication and other utilities; and in community, business and personal services accrued benefits based on final earnings. Transportation, communication and other utilities includes many Crown corporations, whose pension programs are comparable to public service plans. Also, the relatively high percentage of RPP members with final earnings plans in community, business and personal services can be attributed to province-wide plans for teachers and health-care workers.

**Contrasts by sex**

As a whole, female RPP members are in plans that yield larger pensions than those of male participants.

Table 3

**Employer-sponsored pension plan membership, by industry, 1993**

	Type of plan					
	All plans		Defined contribution	Flat benefit	Career earnings	Final earnings
	'000			%		
All industries	5,245	100	9	17	9	64
Primary industries *	103	100	20	34	7	34
Manufacturing	941	100	10	38	19	29
Construction	290	100	11	87	1	1
Transportation, communication and other utilities	427	100	7	7	8	76
Trade	443	100	20	37	24	16
Finance, insurance and real estate	353	100	8	--	7	84
Community, business and personal services **	950	100	12	5	12	69
Public administration and defence **	1,737	100	3	-	1	96

Source: Pension plans in Canada database

\* Agriculture, forestry, trapping, fishing and mining

\*\* Education and health care workers are included in community services in all provinces except Quebec, whose province-wide plan, covering nearly all public sector employees, is coded to public administration

Note: Percentages may not add to 100% because of the exclusion of the "other" plan category defined in Table 1



Because women predominate in some industries where most workers earn final earnings benefits, a larger proportion of female members have such provisions and fewer flat benefits (Table 1). In 1993, women represented 69% of all RPP participants in finance, insurance and real estate; 59% in community, business and personal services, and 51% in public administration and defence. On the other hand, women's representation in industries that favour flat benefit plans is relatively low. In 1993, just 2% of RPP members in construction, 8% in wood products and 15% in transportation equipment were women.

## Summary

Employer-sponsored pension plans vary in both application and design. Retirement benefits depend on factors such as years of participation in the plan and, most frequently, the worker's earnings. The most important factor, though, is the formula used to calculate pensions. The most generous pensions are those linked to earnings at or near retirement. Members of defined contribution plans and those whose pension is a fixed amount for each year of service tend to collect less.

Small and medium-sized employers are less likely than large ones to provide pension plans and, if they do, they tend to favour defined contribution arrangements. Covered workers in public administration and defence, education, health care and Crown corporations nearly always earn pensions based on a percentage of their earnings near retirement. Members of union-negotiated plans typically earn a flat benefit not related to earnings. A substantial portion of women work in industries with generous pension

programs. However, these pensions depend mostly on members' earnings and years of service, both of which may lower benefits accrued by women. □

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## Notes

1 For a detailed analysis of the overall RPP coverage rate and the types of jobs likely to provide such coverage, see Frenken and Maser (1992).

2 In recent years, employer-sponsored group registered retirement savings plans (RRSPs) have become a common alternative to RPPs. They are similar to defined contribution RPPs, but do not require employer contributions *per se*, although employers may pay the administration costs. Employer contributions are treated as members' earned income for income tax purposes. Currently, there are no accurate data on the number of group RRSPs or on the number of members.

3 Some union-negotiated plans have both a defined benefit formula and a stipulated employer contribution rate, usually specified in the union contract. These are treated as defined benefit plans.

4 Many senior executives and owner/operators of incorporated businesses fall into this category. Under Revenue Canada regulations, these "significant shareholders" are not permitted to have a defined benefit plan.

5 Different life expectancies, resulting in a longer projected benefit period for women,

account for the different pensions of men and women. The aggregate pensions, assuming deaths will occur as projected, will be the same.

- 6 Other factors influencing contributions:
  - a) ancillary benefits such as survivors' pensions, indexing, past service benefits, supplements paid on retirement before age 65, and early retirement options, all of which can be very costly
  - b) characteristics unique to each plan, such as different withdrawal rates before retirement and average age of participants
  - c) unfunded liabilities, which require significant employer contributions to liquidate, or pension fund surpluses, which may absolve employers from contributing
  - d) investment earnings, which supplement defined contribution plan premiums but reduce defined benefit costs
  - e) contributions for former members for whom unfunded liabilities may still exist

7 When these provisions were implemented, the earliest age of entitlement for C/QPP retirement benefits was 65. Today, C/QPP benefits can be received at age 60, albeit at a reduced level. The RPP bridging benefits have not been lifted, however.

8 Including many owner/operators of incorporated businesses (see Note 4).

9 The number of plan members is not necessarily equivalent to the size of the employer. Some employers have separate plans for different categories of worker, such as those in various locations or positions. Also, many large RPPs are multi-employer, industry-wide plans with different-sized employers participating: for example, the Quebec Construction Industry Pension Plan, which covers workers employed by approximately 16,000 employers. Therefore, the fact that only 5% of flat benefit members were in plans with fewer than 50 members in 1993 is misleading, in that it suggests, erroneously, that this type of plan is favoured by large employers.

10 These plans are subject to collective agreements. Most unionized RPP members belong to final earnings plans not subject to such agreements.

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# Tired workers

Susan Crompton

Many adults are “time crunched,” juggling the competing demands of work, personal and family responsibilities. Almost half of Canadians aged 15 and over feel they are often not able to finish what they had set out to do each day; one-third feel constantly under stress trying to get things done, and worry that they have taken on more than they can handle. Reflecting the time crunch, some 44% of Canadian adults say they cut back on their sleep to find enough time to meet their waking commitments (Frederick, 1993). And whether they are cheating themselves of sleep or not, almost one-quarter of adults have trouble sleeping when they do get to bed (Tait, 1992).

Given these figures, some writers have concluded that the workplace is full of people so sleep-deprived they can scarcely function.<sup>1</sup> But in 1991, the majority of Canada’s workers (59%) said they “never” had trouble staying awake when they wanted to, while most of the rest admitted they were “sometimes” sleepy. In fact, only 4% of working Canadians aged 15 to 64 – about 500,000 people – complained they had trouble staying awake “most of the time.” This article, which uses data from the 1991 General Social Survey, looks at these workers and then briefly explores a few factors that may be related to their drowsiness.

## Defining the problem

For all the attention paid to the issue of falling asleep on the job – media stories about dozing truck drivers or exhausted air traffic controllers – there is little information in the public domain about the magnitude of the problem. This is partly because much of the research has dealt with the physiological or neurological aspects

of tiredness, and the quantitative analysis published has often focused on shift workers. Furthermore, many studies implicitly assume that anyone who loses sleep will, by definition, be drowsy and less alert. By this reckoning, close to 20% of the workforce could be described as fatigued.<sup>2</sup> However, lack of sleep is not the only cause of daytime sleepiness; many other things can induce it, including excessive warmth, boredom, or performing a demanding but uninteresting task.<sup>3</sup> Therefore, this article measures tiredness based on the respondents’ assessment of their drowsiness during waking hours. This measure captures the frequency with which people find it *difficult to stay awake when they want to be awake*, and produces a much lower estimate of the number of workers who may be falling asleep on the job (see *Data source, definitions and limitations*).

## One in 25 workers chronically tired

At 4%, the proportion of the workforce afflicted with chronic tiredness may be smaller than many people have thought. However, tiredness contributes to declining alertness and deteriorating ability to solve problems, thereby increasing the chances of making errors or having accidents. The safety issues raised by sleepiness at work are thus readily apparent, especially in occupations where the consequences of a mishap could be serious.<sup>4</sup>

However, drowsiness did not seem to be more common in some jobs than in others: about 4% of all workers, regardless of occupation, were chronically tired. Minor variations between different major occupational groupings – for example, services (6%) and clerical and sales jobs (3%) – were not statistically significant. Nor was any particular industry notable for a

large concentration of chronically tired workers; in fact, the only industry that differed significantly from the 4% average was manufacturing, which reported a rate of slightly less than 3%. Interestingly, people not working the traditional hours of “9-to-5” were no more likely than those with a regular daytime schedule to suffer chronic tiredness. Nor was tiredness more common among full-time than among part-time workers.

Even though they are more likely to be responsible for most household duties, working women did not complain of chronic tiredness any more than men did.<sup>5</sup> Having children in the household did not increase the likelihood of being tired; and neither older (45 to 64) nor younger (15 to 24) workers were more likely than others to report frequent bouts of daytime sleepiness.<sup>6</sup>

## Why are workers tired?

The lack of any significant variation in the rates of chronic tiredness across the basic demographic and labour market variables suggests that workers’ sleepiness may not stem primarily from something endemic to the job. The question then is, “Does the personal situation of workers have a greater impact on chronic tiredness than the jobs they hold?” More revealing information results from comparing selected personal characteristics of the 500,000 chronically tired workers with the remaining 11.1 million members of the workforce.<sup>7</sup>

Of course, many factors other than those identified in this study probably influenced these workers’ sleepiness; for instance, frequency of physical activity, smoking and drinking habits, or use of medication. The data cannot show if the tiredness is the result or the cause of the problem. Nevertheless, the factors described here merit discussion.

*Susan Crompton is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-0178.*

## Data source, definitions and limitations

This study uses data from the 1991 General Social Survey (GSS), which gathered information about a variety of health-related topics such as existing health problems, disabilities, visits to medical professionals, hospitalization, use of medication, level of physical activity, smoking and drinking habits, stress, and work environment. The sample of 11,900 households was evenly distributed over the 12 months of 1991 and data were collected every month to offset seasonal variations in the information provided (for example, the amount of physical activity reported increases in the summer).

One of the questions asked respondents how often they had trouble staying awake when they wanted to stay awake – “never,” “sometimes” or “most of the time.” Workers who answered “most of the time” are identified as *chronically tired*. Because the assessment of drowsiness is so personal, only non-proxy responses – that is, respondents who answered for themselves and not on behalf of another household member – are used in the analysis. Non-proxy responses accounted for 99% of the sample; the estimated size of the workforce aged 15 to 64 using only non-proxy responses was almost 12.4 million.

Sample sizes were sometimes too small to produce a reliable estimate, so categories were often combined (for example, regular night shift and rotating shift; construction industry and transportation industry). Also, in a number of cases, differences between two estimates – for example, rates of chronic tiredness across industries – were not statistically significant; that is, it is not

known whether the disparities were real or distortions caused by the sample size.

**Workers:** adults aged 15 to 64 who were employed during the week before the survey (includes paid workers and the self-employed)

**Chronically tired:** workers who reported having trouble staying awake when they wanted to “most of the time.” Synonyms used in this article are tired, drowsy, sleepy or daytime sleepiness.

## Limitations

The question on frequency of sleepiness does not explicitly ask respondents if they had “trouble staying awake” at work. However, a worker is more likely to remember dozing at work, when staying alert is important, than drifting off during the 11 o’clock news. Furthermore, if people find themselves nodding off unwillingly “most of the time,” such drowsiness is likely to spill over into the workplace.

Another question to address is the validity of a self-assessed rating of sleepiness; in other words, are people who think they are sleepy, actually sleepy, and therefore a potential hazard to themselves or others? A 1994 study (Gillberg, Kecklund and Åkerstedt) shows that self-assessment successfully predicts deteriorating performance due to sleepiness. Furthermore, as the authors observe, self-assessment of sleepiness is the only information available when a worker must decide whether to stop working to avoid accidents or mistakes. This is especially true of unsupervised jobs.

worker from sleeping well. However, only half of tired workers had children at home, and of these working parents, just 41% had a child under six. Almost the same portrait can be drawn of non-drowsy workers.

On the other hand, chronically tired workers were more likely to describe their lives as “very stressful”: 14% compared with 8% of all other workers.<sup>9</sup> Part of this stress may have been attributable to work, since 51%

of drowsy workers were worried about something on the job, versus 39% of other workers (Chart). Tired men were the biggest worriers, with 60% of them fretting about work compared with only 40% of non-drowsy men; tired women, at 42%, were no more likely than other employed women to report any work-related worry.

By far the biggest concern, cited by 67% of chronically tired worriers, was too many demands at work or too many hours of work.<sup>10</sup> A distant second was poor interpersonal relations, followed by threat of layoff or job loss, harassment and/or discrimination, and risk of accident or injury. Worriers in the rest of the workforce were plagued by these concerns in about the same proportions, with the exception of those who cited “poor interpersonal relations.” Trouble with people at work bothered only 29% of non-drowsy workers, compared with 45% of chronically tired workers.

## Poor health more prevalent among tired workers

Workers who had trouble staying awake did report more health problems than other workers – 71% compared with 60%. Despite their higher reported stress levels, though, the percentage of drowsy workers suffering from stress-related medical conditions – such as high blood pressure, recurring migraines, or ulcers and other digestive problems – was no different from that reported by the rest of the workforce. They were, however, twice as likely to have been diagnosed with asthma (18% versus 9%).

Although their health was poorer, chronically tired workers did not take significantly more sick leave than other workers. About 58% had missed work in the previous 12 months because of illness or injury, compared with 50% of non-drowsy workers. Most workers taking sick leave, tired or not, booked off for five days or less.

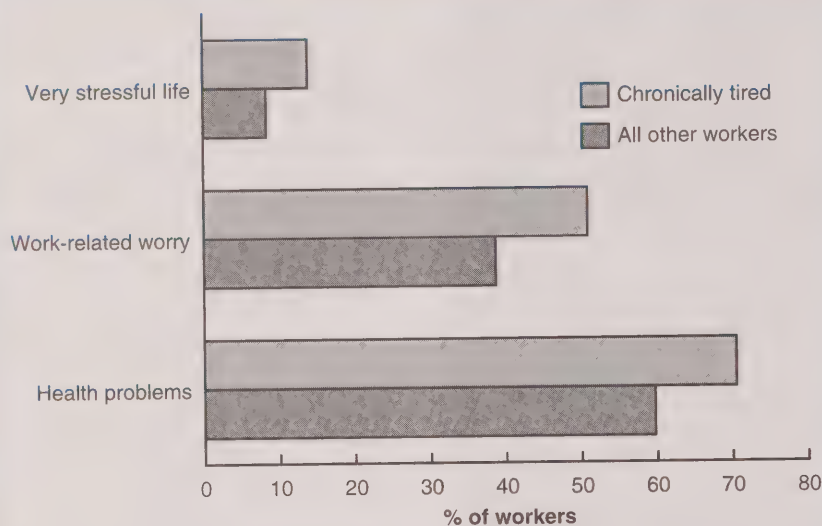
## Tired workers worry more

In 1991, chronically tired workers averaged seven hours of sleep a night, no less than that reported by other workers. However, they were more likely to have trouble getting to sleep or staying asleep – 30% versus 19% – and they were less likely to describe their sleep as refreshing “most of the time” – 57% versus 76%.<sup>8</sup>

The first question to ask is whether a child might be preventing the



Chart

**Chronically tired workers tended to have more pressure in their lives.**

Source: General Social Survey, 1991

**Tired workers believe the workplace is more hazardous**

About two-thirds of both chronically tired and non-drowsy workers reported exposure to air-borne dust and fibres, chemicals or fumes, poor quality air, loud noise or computer display terminals. However, among workers who were exposed, a higher proportion of sleepy workers – 59% compared with 47% of other workers – believed that these workplace conditions had a negative effect on their health.

Surprisingly, work-related accidents were no more common among tired than other workers. About 13% of chronically tired workers had suffered a workplace injury in the preceding 12 months, as had 8% of non-drowsy workers, but the difference was not statistically significant.<sup>11</sup>

**Summary**

At 4% of workers aged 15 to 64, the chronically tired made up a very small proportion of the 1991 workforce. In most respects, their

demographic and labour market characteristics were no different from those of workers who did not suffer from drowsiness: perhaps the most striking quality about chronically tired workers is how uniformly they are distributed throughout the workforce. They were not concentrated in any particular major occupation or industry group, or even any type of shift schedule. Women were no more prone than men to chronic tiredness. Workers with young children were no more likely than those without preschoolers to be tired.

However, tired workers display individual characteristics that differ considerably from those of non-drowsy workers. Although chronically tired workers had the same amount of sleep each night as the rest of the workforce, they tended to be worriers; they were also more likely to have chronic health problems and almost twice as likely to consider their lives very stressful. All these factors – and undoubtedly many more – may have commingled to cause or exacerbate their tiredness. □

**Notes**

1 For example, in "Asleep at the wheel," Canadian Press journalist Marlene Orton writes of "millions ... who drag their weary bodies from bed every day. Offices, factories, households and even the highways are filled with exhausted people who simply have not had a decent rest." (*Ottawa Citizen*, 27 October, 1994).

2 Sleep problems were reported by 19% of working Canadians.

3 D.F. Dinges cited by Babkoff, Caspy and Mikulincer (1991).

4 Nurses on a rotating shift nodded off twice as frequently as those on a regular day/evening shift, and recorded twice as many accidents or errors related to sleepiness (Gold and others, 1992). In the United States, the role sleepiness plays in accidents is being argued in the courts, where an increasing number of employers are being sued by workers injured in accidents related to work-induced tiredness (*Trial*, 1993).

5 Marshall (1993) found that most wives in dual-earner families with children have primary responsibility for household tasks.

6 Matousek (1992) observed that daytime sleepiness affects young people (in his study, aged 20 to 33) more frequently than middle-aged people (aged 51 to 64), a finding he confirmed by self-assessed sleepiness ratings and by EEG monitoring. He suggests that this disparity may be due to different lifestyles.

7 Since characteristics of workers who "sometimes" and those who "never" have trouble staying awake are generally similar, the two groups are combined for the sake of clarity and brevity.

8 A recent study found that the amount of compensatory sleep needed after a night of sleep loss exceeded the extra 10% to 20% generally thought to be necessary. The researchers observed that this finding has considerable implications for people who consistently obtain less sleep than they need (Rosenthal and others, 1993).

9 A number of studies of insomniacs have found that stress and anxiety consistently affect certain stages of sleep, and that they may be partly responsible for sleep-maintenance insomnia. Research by Waters and others (1993) on the impact of stress, negative emotion and sensitivity to distractions in the sleeper's environment concluded that "insomniacs' sleep/wake systems are more responsive to emotional, stress and novel attention-provoking stimuli than are those of normal sleepers."

10 Sunter and Morissette (1994) found that although the average number of hours in the standard work week has not changed over the last decade, this stability masks a substantial polarization of workers into those working longer hours (50 or more per week) and those working shorter hours (less than 30 per week).

11 Rates for workplace injuries were more than twice as high for men as for women whether they were tired or not (11% compared with 5%), reflecting the generally more hazardous nature of many blue-collar jobs.

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# Hiring difficulties in manufacturing

Claude Robillard

The proportion of manufacturers reporting labour shortages as a production impediment rises and falls with the business cycle. According to Statistics Canada's quarterly Business Conditions Survey (BCS), even in recessions there are shortages of skilled labour, although the need for unskilled workers is another story.<sup>1</sup> Shortages tend to be more prevalent among small than among large manufacturers, especially during periods of economic growth.

## Skilled labour shortages persist

Among the questions the BCS (see *Data source*) asks Canadian manufacturers is whether a shortage of skilled or unskilled workers is impeding their production. Reported shortages of skilled labour persist through recessions. For instance, during the last recession the proportion of manufacturing firms with shortages of skilled workers never fell below 2% (Chart A). By the third quarter of 1994, the figure had risen to 4%, reflecting the overall improvement in the economy that year, particularly in manufacturing, which sustained employment growth during the last three quarters (Akyeampong, 1995).

By contrast, even in periods of expansion few manufacturers report shortages of unskilled workers. In late 1994 and early 1995, the share of firms citing a lack of unskilled labour as a production impediment was so small that it was reported as zero.

## Small firms ... more shortages

Shortages of skilled labour characterize both small and large manufacturers. However, small firms are more

*Claude Robillard is with the Industry Division. He can be reached at (613) 951-3507.*

Chart A

**Regardless of business conditions, some manufacturing production is impeded by a shortage of skilled labour.**



Source: Business Conditions Survey

Note: This survey is conducted four times a year

\* Reporting labour shortages as production impediment

## Data source

The Industry Division of Statistics Canada conducts the Business Conditions Survey (BCS) every January, April, July and October. The BCS is a voluntary survey reaching more than 9,000 establishments and using virtually the same sample as the monthly Survey of Manufacturing. Results are based on the responses of some 5,000 manufacturers. No adjustments are made for non-response.

Firm size is determined on the basis of 1992 shipments. Establishments with manufacturing shipments totalling more than \$10 million are considered to be large manufacturers.

Among other things, the BCS asks manufacturers if shortages of skilled and unskilled labour have impeded their production. Responses are weighted by the shipment value of each establishment. Production impediments of large manufacturers have a greater effect on the reported percentage than do those of

small firms. For instance, an establishment with annual manufacturing shipments of \$100 million would have twice the impact of a firm with \$50 million.

Survey results are released in the Statistics Canada *Daily* the first week after the reference month. In addition to employment prospects information, seasonally adjusted data on opinions about production prospects, current level of finished product inventories and new and unfilled orders are available at the national level. Data (not seasonally adjusted) are provided for total manufacturing by province and by establishment size, as well as for all characteristics (including production impediments) at the national level by major industry group. The information is available on CANSIM (matrices 2843 and 2845).

For further information, contact Claude Robillard, Monthly Survey of Manufacturing, Industry Division (613) 951-3507 or fax (613) 951-3522.

Chart B

**Shortages of skilled labour are more likely to be reported by small firms throughout the business cycle ...**



**... while shortages of unskilled labour surface only when the economy is booming.**



Source: Business Conditions Survey

Note: This survey is conducted four times a year. Firm size is based on the value of 1992 manufacturing shipments (\$10 million being the small/large threshold).

\* Reporting labour shortages as a production impediment

likely than large ones to report such shortages, particularly during periods of growth. For example, in 1988 and 1989, the percentage of small firms with shortages of skilled workers ranged from 16% to 25% (Chart B). The corresponding range for large firms was 6% to 12%.

Small firms' reported shortages of skilled labour may be partly explained by their relatively low benefits and pay. Workers in small firms are less likely to be unionized, less likely to be covered by pension plans, and more subject to permanent layoff. But perhaps most importantly, large

firms pay higher wages (Morissette, 1991). The 1994 figures from the Survey of Employment, Payrolls and Hours show that hourly earnings in large manufacturing firms averaged \$18.45, compared with \$12.98 in small firms.<sup>2</sup>

### A precursor?

During recessions, reported shortages of skilled labour decline, but remain more prevalent in small than in large firms. Moreover, as the economy recovers, small firms report such shortages sooner than do large establishments. After the recession of the early 1980s, the percentage of small manufacturers citing shortages of skilled workers as a production impediment started to rise in 1983, two years earlier than in large firms. Similarly, after the most recent recession, the share of small firms with labour shortages began increasing in 1992, with large establishments following in 1994.

Thus, shortages of skilled labour seem to affect large manufacturers only when economic growth is sustained. At such times, the labour market is tight, with both small and large firms competing for additional skilled workers to meet their increased production.

### Unskilled labour

Small firms are also more likely than large ones to report shortages of unskilled workers, especially when the economy is growing. In the late 1980s, the proportion of small firms reporting a shortage of unskilled labour varied between 5% and 11% (Chart B). Over the same period, the share of large manufacturers with shortages of such workers never rose above 3%.

During recessions, shortages of unskilled workers are almost non-existent in large firms and minimal in small ones. For example, since the beginning of 1991, virtually no large firms have reported shortages of un-



skilled workers. With only two exceptions (the fourth quarters of 1991 and 1992), virtually no small firms reported such shortages from early 1991 to the second quarter of 1994. Since then, 1% of small firms have indicated shortages of unskilled workers.

## Summary

The proportion of manufacturers citing labour shortages as a production impediment falls in recessions and rises as the economy recovers. However, even in economic downturns, some firms report shortages of skilled workers. And regardless of business conditions, a higher proportion of small than of large firms report labour shortages. Furthermore, shortages of skilled workers in small firms seem to herald similar requirements in

larger firms. If the rate of employment growth recorded in manufacturing in 1994 is sustained in 1995, labour market analysts and human resources specialists will want to monitor upcoming results of the Business Conditions Survey.

## Update

Second quarter data for 1995, received just before press time, revealed that the proportion of manufacturing firms citing shortages of skilled and unskilled labour remained unchanged since the previous quarter. Fewer small firms (12%, compared with 14%) reported a shortage of skilled labour. Proportions remained the same for large firms, for both skilled and unskilled labour.

## Notes

1 Manufacturers polled by the BCS use their own definitions of skilled and unskilled labour.

2 A minor conceptual difference exists between the BCS and the Survey of Employment, Payrolls and Hours (SEPH) definitions of large and small firms. For the production impediments question, the BCS definition is based on annual manufacturing shipment values, while SEPH uses 300 employees as the small/large threshold.

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# What's new?

## ■ JUST RELEASED

### ■ *First SLID analytical reports whet appetite for full longitudinal microdata file*

*Dynamics of Labour and Income: 1994 Report* introduces some of the benchmark data collected by the Survey of Labour and Income Dynamics (SLID). This longitudinal survey records events in a person's life that can influence economic well-being – such as moving, or family formation or dissolution – and relates them to changes in labour force activity and income. Twice a year for six years, SLID will collect data from approximately 40,000 households. (For detailed information about SLID methodology, see "What's new?", Spring 1994).

The 1994 report uses the information gathered during the preliminary interview, conducted in January 1993 to establish the basic demographic and socio-economic profiles of the households. (A complete microdata file incorporating the preliminary benchmark data, as well as the data from the first full year's interview, will be available soon.) The five reports in *Dynamics of Labour and Income* illustrate the scope and level of analysis that the survey can support. Their major findings are briefly described below.

"The wage gap between men and women: An update" uses the "SLID advantage" provided by wide coverage of labour market characteristics – such as work experience, hours of work, job tenure, education and field of study – to assess sources of wage disparities between men and women. The study concludes that

- only a small part of the gap in men's and women's earnings can be explained by differences in education, demographic characteristics and work experience.
- the gap has been narrowed in recent years by the high proportion of women with postsecondary qualifications in education and health, fields that traditionally pay well.
- there is also a wage gap related to age. The gap between men aged 25 to 34 and those aged 35 to 54 is more pronounced than the gap between younger and older women.

"The work experience of Canadians: A first look" analyzes the continuity of, and interruptions in, employment. See *Perspectives'* adaptation of the article (this issue) for details.

"Intergenerational change in the education of Canadians" compares adults' educational attainment with that of their parents. The study shows that

- two-thirds of Canadian adults exceeded the educational attainment of their parents; less than one-tenth had less education than their parents. Generally, the improvement in educational attainment did not vary by sex of respondent or parent.
- just over half of adults attended a postsecondary institution, compared with one-tenth of their parents.
- adults whose parents had a postsecondary education were twice as likely to have postsecondary qualifications as adults whose parents had not completed secondary school.

"SLID employment equity data" discusses how SLID identifies visible minorities and Aboriginal peoples. The article also presents some basic counts and characteristics of the two designated groups, and compares the results with data from the 1991 Census.

"Following life events" summarizes the demographic and family data gathered in the preliminary interview. This information will be updated annually to track changes in family composition. According to the 1993 data,

- 70% of women 18 or over have given birth to at least one child, and about 5% have raised or adopted children not born to them.
- 9% of women had their first child before they were 19, while another 9% were 30 or older.
- about 9% of adults who have ever been married have been married more than once; average age at first marriage was 26 for women and 28 for men in 1990.
- 6% of adults live in common-law relationships.

A special overview of the SLID survey content and the uses and benefits of the data rounds out the report.

*Dynamics of Labour and Income: 1994 Report* (Catalogue 75-201E) is available for \$37 from any Statistics Canada Reference Centre, or from Marketing Division, Sales and Service, Statistics Canada, Ottawa K1A 0T6; fax (613) 951-1584. Or call toll free 1 800 267-6677. □



### ■ *Historical revision generates new LFS data products*

The Labour Force Survey (LFS) estimates have recently been extensively revised; however, the impact on the LFS series is fairly limited. Numerical estimates of employment, unemployment and the population not in the labour force have increased, but employment/population ratios, unemployment rates and participation rates are virtually unchanged. (For a brief description of the changes, see "What's new?", Spring 1995.)

Several new products containing the revised series have been developed. *Labour Force Annual Averages* (Catalogue 71-529) carries revised data for the period 1989 to 1994, and replaces Catalogue 71-220 for this year. The *Historical Labour Force Statistics* (Catalogue 71-201) publishes the entire revised time series, providing provincial and national estimates from 1976 to 1994 and subprovincial data from 1987 to 1994. Users may purchase the revised data on CD-ROM: the bundled Ivison Browser software package allows users to manipulate data, create charts and maps, print the output and export data to other software packages.

The feature article in *Labour Force Annual Averages* (Catalogue 71-529) takes advantage of the revision to examine trends from 1976 to the present. During this time, the economy experienced two complete business cycles, in addition to a number of non-cyclical trends. Developments discussed in the article include the following:

- From 1976 to 1994, employment in the services-producing sector grew by 55%, compared with only 2% in goods-producing industries. As a result, services' share of total employment rose from 64% to 73% over the period.
- In 1994, almost 17% of total employment in the economy was part-time, up from close to 11% in 1976. The community, business and personal services industries accounted for three-quarters of this increase in part-time work.
- Self-employment seemed relatively unaffected by the two recessions and almost doubled over the period, rising 92% to over 2 million workers and from 11% to almost 16% of total employment.
- Average job tenure grew between 1976 and 1994. The increase was due primarily to adult women, as their job tenure increased by 18 months. Over the same period, the average job tenure of men aged 25 to 44 rose, while that of youths and men over 45 remained the same.

For information about the CD-ROM, call Vincent Ferrao at (613) 951-4750. *Labour Force Annual Averages* (Catalogue 71-529) is available for \$120, and *His-*

*torical Labour Force Statistics* (Catalogue 71-201) for \$74 from any Statistics Canada Reference Centre, or from Marketing Division, Sales and Service, Statistics Canada, Ottawa K1A 0T6; fax (613) 951-1584. Or call toll free 1 800 267-6677. □

### ■ *Employment equity source book for researchers*

A new reference document makes it easier to find statistical information about employment equity. The *Bibliographic Employment Equity Database* is an annotated bibliography of research studies of the four designated equity groups (women, visible minorities, Aboriginal peoples and persons with disabilities). Entries are restricted to Canadian sources published after 1981 that provide statistical information or data analysis.

The database contains separate chapters for each of the four designated groups, plus chapters covering reference works dealing with multiple designated groups (for example, visible minority women), immigration, and international comparisons. Each entry notes the coverage provided by the study, the source of data, topics discussed, index terms, author, and languages in which the document is available. The subject index is based on keyword search for quick access.

The *Bibliographic Employment Equity Database* (Catalogue 89F0029XPE) is available for \$30 from any Statistics Canada Reference Centre, or from Marketing Division, Sales and Service, Statistics Canada, Ottawa K1A 0T6; fax (613) 951-1584. Or call toll free 1 800 267-6677. □

### ■ *Analytical Studies Branch examines sources of job growth*

*Employment Generation by Small Producers in the Canadian Manufacturing Sector*  
J. Baldwin and G. Picot  
Research Paper Series No. 70

This paper uses job turn-over data to compare job creation, job destruction, and net job change in small and large manufacturing establishments. The authors use several techniques to correct for the regression-to-the-mean problem that has been thought to lead to the conclusion, possibly incorrect, that small establishments create a disproportionate number of new jobs. After these adjustments are made, however, the authors confirm that net job creation is greater for smaller establishments than for large ones. The paper also considers the importance of small establishments in Canada vis-à-vis the United States, and shows that smaller establishments account for a larger

proportion of manufacturing employment in Canada, and are growing in importance faster than their American counterparts.

*Have Small Firms Created a Disproportionate Share of New Jobs in Canada? A Reassessment of the Facts*

G. Picot, J. Baldwin and R. Dupuy

Research Paper Series No. 71

The observation that small firms created the majority of new jobs during the 1980s had a tremendous influence on public policy. However, recent research in the United States suggests that net job creation in the small firm sector may have been overestimated. The paper addresses various measurement issues raised in this research and uses a unique Canadian longitudinal data set to reassess job creation by firm size. The authors conclude that over the 1978-92 period, no matter which method of sizing firms is used, small firms have accounted for a disproportionate share of both job gains and losses, and in the aggregate, contributed a disproportionate share of the increase in general employment. The paper also publishes results for various industrial sectors, asks whether the more rapid growth in industries with a high proportion of small firms is responsible for the findings at the all-economy level, and examines employment growth in existing small and large firms.

To order, or for more information about the Research Paper Series and other publications produced by the Analytical Studies Branch, contact Valerie Thibault at (613) 951-1804. □

## ■ NEW SURVEY

### ■ *May 1995: Follow-up of 1990 Graduates Survey*

The Follow-up of 1990 Graduates Survey (1990 FOG) is part of an ongoing series of longitudinal surveys sponsored by Human Resources Development Canada to collect information about the labour market experiences of recent graduates. The Survey of 1990 Graduates was conducted in May 1992, two years after the respondents had completed a university degree, college diploma, or trade/vocational program. In May 1995, the follow-up interviewed these respondents again. It captured not only the basic measures of labour force activity – entry into and exit from the job market, periods of unemployment, occupation, income, and whether the graduates' jobs were related to their education – but also information about the link between education, labour market experience and further education or training.

Data from both the original and follow-up surveys are comparable with earlier surveys in the series (1982 and 1986 graduates), thus enabling both longitudinal and time series analyses of the five-year period following graduation.

For further information, call Bill Magnus, Special Surveys Division, at (613) 951-4577, or Warren Clark, Education, Culture and Tourism Division, at (613) 951-1522. □

## ■ SPECIAL CONFERENCE REPORT

### ■ *Major evaluation of unemployment insurance program unveiled at CERF conference*

Unemployment Insurance (UI) is a powerful social program offering Canadians temporary income protection, smoothing consumption patterns, and providing economic stabilization. The program is delivered by Human Resources Development Canada (HRDC), which recently completed an extensive evaluation of UI to assess its success in achieving its goals, as well as its cost-effectiveness and continued relevance. Over 25 studies by academics, other researchers and staff evaluators were commissioned, focusing on UI's effects on worker and employer behaviour. In emphasizing UI's actual observed impact on the labour market, the evaluation program provides a more comprehensive understanding of UI than has existed before.

In October 1994, some preliminary results of the evaluation were presented at the annual conference of the Canadian Employment Research Forum (CERF) in Ottawa. These studies, as well as others not discussed at the conference, have been released in a range of formats developed to meet the requirements of a variety of readers. In addition to the main proceedings, a series of technical papers has been prepared for distribution. For readers interested mainly in the findings, four-page executive summaries of the research papers are available under the series title, "HRDC Evaluation Briefs." Briefs of interest to *Perspectives* readers are described below. These background reports, while designed to be stand-alone studies, are part of an overall evaluation framework; the final report will assess, on balance, the evidence for the benefits and costs of the UI system. (For a summary of papers presented at the 1993 CERF conference on "A comparison of labour markets in the last two recessions," see "What's new?", Autumn 1993.)



■ ***Qualifying for unemployment insurance***  
(Evaluation brief no. 1)

In 1990, the period of employment required for UI eligibility was temporarily increased to a fixed 14 weeks. The authors discovered that this increased the number of weeks worked, raising it close to the level needed to be eligible for benefits: the “spike” in the job-leaving rate occurred at 14 weeks in 1990, compared with 10 weeks in 1989. Low wage workers in seasonal industries showed the most notable change. However, changes in the duration of employment were much more pronounced for workers who were laid off than for those who quit, suggesting that firms’ behaviour, not only workers’, is affected by UI eligibility requirements. In the maximum entitlement regions, workers recorded an extra 1.5 weeks of employment, producing an average 0.4 percentage point reduction in the unemployment rate.

■ ***The distributional implications of unemployment insurance*** (Evaluation brief no. 2)

The authors designed a UI behavioural micro-simulation model to test two things. First, the model examined the income redistribution over the 1981-89 business cycle of the UI system as it operated in 1971, 1990 and 1994, compared with the system in place in 1986; second, it examined the impact of possible parameter changes, such as extending the minimum weeks required to qualify for UI, cutting benefits, and reducing the maximum weeks of benefits. They conclude that any “tightening up” of the UI system would increase income inequality, perhaps unnecessarily, since average weeks of unemployment did not appear to be noticeably affected by the changes proposed.

■ ***Unemployment insurance and job search productivity*** (Evaluation brief no. 3)

Using longitudinal data, the authors examine the linkages between UI and the vigour with which the unemployed look for work, the probability of re-employment, and re-employment wages. They conclude that duration of unemployment is more important than UI benefits in determining job search intensity. Unemployed job seekers, whether eligible for UI or not, maintain a fairly constant level of search activity for the first 9 months following job loss; the intensity steadily declines until, after about 18 months, the search virtually ceases. Furthermore, higher pre-unemployment wages are associated with lower re-employment probabilities.

■ ***Learning effects and unemployment insurance*** (Evaluation brief no. 4)

Frequent users of UI have accounted for a growing proportion of UI recipients over the last two decades. Longitudinal data on male workers from 1972 to 1992 indicate

that for low-frequency users the UI program remains a social insurance system that protects against labour market risks; however, for high-frequency users UI is increasingly a permanent income support program bearing little or no relation to labour market risk. The data also show that first exposure to UI permanently increases the probability of collecting benefits again. The authors suggest that a recipient’s familiarity with the system, learned during the first experience with UI, may explain some of the dynamics of UI dependency and hysteresis.

■ ***Employment patterns and unemployment insurance*** (Evaluation brief no. 7)

The influence of the UI entrance requirement (number of weeks worked to qualify for benefits) on job duration is examined using longitudinal data from 1986 to 1990. The findings appear to show that both employers and employees take action leading to job separation once the requirement has been met, increasing by over 50% the chances of job separation at this point.

■ ***Unemployment insurance, temporary layoffs and recall expectations*** (Evaluation brief no. 8)

Between 1986 and 1988, almost 60% of laid-off workers were recalled by their previous employer, indicating that temporary layoffs play an important role in the way the labour market functions. Furthermore, over 40% of UI claimants who had made five or more claims in the previous 12 years (1978 to 1989) had, during that time, worked for no more than three different employers. Laid-off workers who are recalled, as well as those who do not expect to return to their old job, spend fewer weeks collecting UI than workers who expect to be recalled but are not.

■ ***Job separations and the passage to unemployment and welfare benefits*** (Evaluation brief no. 9)

Using HRDC panel data on a 10% sample of job-leavers in the first half of 1993, the paper examines the use of UI and welfare and the interactions between them. Preliminary results showed that almost two-thirds (63%) of job separators had found new employment within five months of becoming unemployed. Among those who had not been re-employed, only 6% collected welfare in addition to claiming UI. Of this small 6% minority, over half were waiting for their UI payments to begin and one-tenth had exhausted their benefits.

■ ***Income and living standards during unemployment*** (Evaluation brief no. 14)

UI benefits account for the major portion of income for unemployed recipients, and the author estimates that cutting benefits from 60% to 50% of insurable earnings

would produce a 3% to 6% drop in household consumption. Households with repeat UI users (claiming UI at least three times in five years) would suffer most.

■ ***Jobs excluded from the Unemployment Insurance system in Canada: An empirical investigation*** (Evaluation brief no. 15)

UI coverage has always excluded part-time (15 or less paid hours per week) and self-employed workers. However, between 1986 and 1990, jobs covered by UI grew 2.4%, while those excluded increased 16%. By 1990, 3.2 million jobs had no coverage – 1 million part-time and 2.2 million self-employed jobs. Workers without UI coverage were more likely to have postsecondary education, work in service industries without job-related pension plans and be relatively low paid.

■ ***Firms, industries and cross-subsidies: Patterns in the distribution of UI benefits and taxes*** (Evaluation brief no. 16)

For many years, some provinces and industries have consistently been net contributors to UI and others have been recipients. Ontario is a net contributor of UI benefits while provinces to the east are net recipients. Similarly, among industries consistently contributing to UI are community, business and personal services, and transportation; those receiving benefits include construction, forestry, and agriculture. Furthermore, firms that are continual net recipients account for a small fraction of all jobs in the economy (14%) but for a significant portion of all benefits paid by the UI program (38%). On the other hand, much redistribution of UI occurs within industries. An industry with many net recipients may also harbour many firms that are net contributors: for example, 26% of construction firms are consistently subsidized but some of that money comes from the 23% of construction firms that have never been subsidized by UI.

■ ***Effects of Bill C-113 disentitlement on UI and welfare take-up rates*** (Evaluation brief no. 17)

Bill C-113 disqualified voluntary quitters from UI eligibility and cut benefits from 60% to 57% of insurable earnings. Following its implementation, the rate of voluntary quitting dropped compared with previous years; however, the decline was small, and 19% of workers who quit their jobs still claimed UI. The authors found no evidence that

cutting UI benefits positively affected the re-employment rates of voluntary quitters. They conclude that Bill C-113's major contribution was to discourage quitters from applying for benefits in the first place. On the other hand, welfare take-up rates increased among workers disqualified from UI, effectively shifting the cost of social welfare from the federal to the provincial governments.

■ ***Effects of benefit rate reduction and changes in entitlement (Bill C-113) on unemployment, job search behaviour and new job quality*** (Evaluation brief no. 20)

People unemployed before the introduction of Bill C-113 (Cohort 1) reported better re-employment outcomes than those unemployed afterwards (Cohort 2). Members of Cohort 1 were more likely to be re-employed within five to seven months of job separation than were those of Cohort 2, at 31% versus 21%, although there was no significant difference in job search activities. However, Cohort 2 members were generally less happy with their post-unemployment jobs, suggesting that they accepted whatever jobs were available.

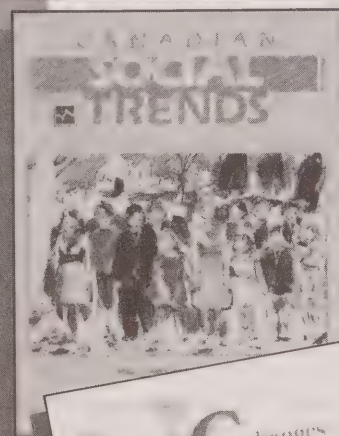
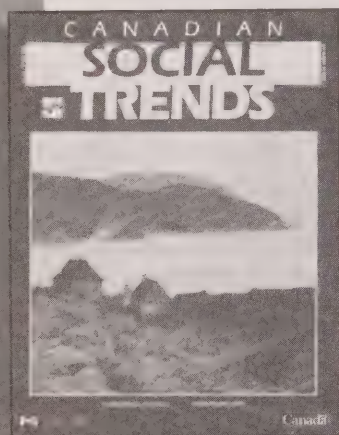
■ ***Unemployment insurance and labour market transitions*** (Evaluation brief no. 22)

UI can have a profound effect on worker behaviour. On the one hand, UI can improve the skills match between worker and job, thus enhancing productivity; under this scenario, one can also expect longer spells of unemployment because workers receiving UI are able to reject job offers that do not meet expectations. On the other hand, UI may encourage patterns of employment and unemployment that create repeated use of benefits. The author finds that the probability of moving from non-employment to employment is greater for men and for those with a higher level of education. But because receiving UI does not significantly affect the probability of either finding a job or leaving the labour force, UI has not lengthened the period of unemployment.

For further information about the Unemployment Insurance Evaluation Study Project, contact Ging Wong, Program Evaluation Branch, Human Resources Development Canada at (613) 954-7709, or fax (613) 954-0134. To obtain copies of the HRDC Evaluation Briefs and the Technical Reports, write to: Enquiries Centre, 140 Promenade du Portage, Phase IV, Level 0, Hull, Quebec, K1A 0J9; fax (819) 953-7260. □



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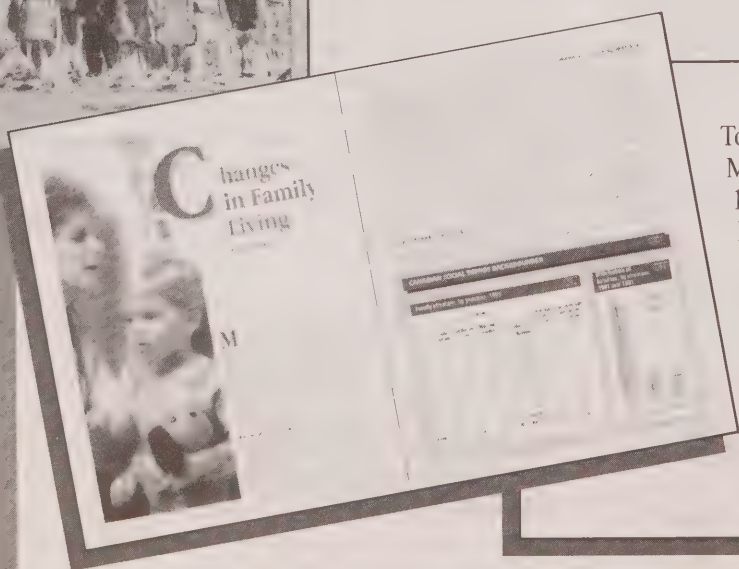
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# Key labour and income facts

The following selection of labour and income indicators is drawn from 11 sources and includes published and unpublished annual data. These indicators appear in every issue.

The latest annual figures are always shown; as results become available, the indicators are updated so that every issue contains new data. An indicator updated or revised since the last issue is "flagged" with an asterisk.

## Data sources

The indicators are derived from the following sources:

- |                      |  |
|----------------------|--|
| <b>1-14 &amp; 16</b> | <b>Labour Force Survey</b><br>Frequency: Monthly<br>Contact: Doug Drew (613) 951-4720                          |
| <b>15</b>            | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211                |
| <b>17</b>            | <b>Absence from Work Survey</b><br>Frequency: Annual<br>Contact: Nancy Brooks (613) 951-4589                   |
| <b>18</b>            | <b>National Work Injuries Statistics Program</b><br>Frequency: Annual<br>Contact: Joanne Proulx (613) 951-4040 |
| <b>19</b>            | <b>Help-wanted Index</b><br>Frequency: Monthly<br>Contact: Adib Farhat (613) 951-4045                          |
| <b>20-21</b>         | <b>Unemployment Insurance Statistics Program</b><br>Frequency: Monthly<br>Contact: Adib Farhat (613) 951-4045  |
| <b>22-29</b>         | <b>Survey of Employment, Payrolls and Hours</b><br>Frequency: Monthly<br>Contact: Cindy Ingalls (613) 951-4090 |

- |              |  |
|--------------|--|
| <b>30-32</b> | <b>Major wage settlements, Bureau of Labour Information (Human Resources Development Canada)</b><br>Frequency: Quarterly<br>Contact: Information (819) 997-3117          |
| <b>33-35</b> | <b>Labour income (Revenue Canada, Taxation; Survey of Employment, Payrolls and Hours; and other surveys)</b><br>Frequency: Quarterly<br>Contact: Ed Bunko (613) 951-4048 |
| <b>36-46</b> | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211  |
| <b>47-53</b> | <b>Household Facilities and Equipment Survey</b><br>Frequency: Annual<br>Contact: Penny Barclay (613) 951-4634   |
| <b>54-59</b> | <b>Small area and administrative data</b><br>Frequency: Annual<br>Contact: Customer Services (613) 951-9720  |

Notes and definitions of certain indicators are given at the end of the table.

## Additional data

The table provides, at the most, two years of data for each indicator. A longer time series (generally 10 years) for this set of indicators can be obtained, on paper or diskette, at a cost of \$50. (A more extensive explanation of the indicators is also available.) This 10-year data set is updated quarterly. For information, contact Jeannine Usalcas at (613) 951-6889; fax (613) 951-4179



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Labour market</b>								
1*	Population 15 years and over	'000	1993	22,371	454	102	719	589
			1994	22,717	456	103	725	594
	Change	%		1.5	0.4	1.5	0.9	0.9
2*	Labour force	'000	1993	14,663	242	66	431	349
			1994	14,832	244	68	438	351
	Change	%		1.2	1.1	1.8	1.5	0.5
3*	Participation rate	%	1993	65.5	53.2	65.3	60.0	59.3
			1994	65.3	53.6	65.5	60.4	59.1
4*	Employed	'000	1993	13,015	193	54	368	305
			1994	13,292	195	56	380	307
	Change	%		2.1	0.7	3.1	3.1	0.7
5*	Proportion of employed working part time	%	1993	17.2	14.2	17.3	17.8	15.9
			1994	17.0	13.5	16.3	18.6	15.6
6*	Proportion of part-timers wanting full-time work	%	1993	35.7	63.7	--	47.9	50.5
			1994	35.2	59.6	--	46.0	48.5
7*	Unemployed	'000	1993	1,649	49	12	63	44
			1994	1,541	50	12	58	44
	Change	%		-6.6	2.5	-4.1	-7.8	-0.4
8*	Official unemployment rate	%	1993	11.2	20.1	18.1	14.7	12.6
			1994	10.4	20.4	17.1	13.3	12.4
<b>Alternative measures of unemployment</b>								
9*	Unemployed 14 or more weeks as a proportion of the labour force	%	1993	5.6	10.7	7.8	7.0	5.4
			1994	5.1	11.5	7.0	6.0	5.1
10*	Unemployment rate:							
	- of persons heading families with children under age 16	%	1993	9.5	19.1	17.9	12.5	11.4
			1994	9.0	19.4	16.1	12.0	11.3
	- excluding full-time students	%	1993	10.9	20.0	18.0	14.3	12.3
			1994	10.1	20.5	17.5	13.1	12.3
	- including full-time members of the Canadian Armed Forces	%	1993	11.1	20.1	17.7	14.2	12.4
			1994	10.3	20.5	17.0	12.9	12.3
	- of the full-time labour force	%	1993	13.9	24.0	21.6	18.3	16.1
			1994	13.0	24.0	20.7	17.1	15.9
	- of the part-time labour force	%	1993	14.4	21.5	13.0	18.0	15.7
			1994	13.3	20.1	11.7	16.4	14.4
	- including discouraged workers and others on the margins of the labour force	%	1993	12.0	24.4	18.9	15.6	14.2
			1994	11.0	24.5	17.7	14.5	13.9
11*	Underutilization rate based on hours lost through unemployment and underemployment	%	1993	14.6	24.8	22.3	19.1	17.3
			1994	13.7	24.6	21.5	18.0	17.1
12*	Proportion unemployed six months or longer	%	1993	30.8	33.3	--	26.9	23.6
			1994	30.2	36.1	--	25.6	24.2

See *Notes and definitions* at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
5,692	8,447	840	740	2,007	2,782	..	..	1993	'000	1
5,753	8,588	845	745	2,039	2,869	..	..	1994		
1.1	1.7	0.6	0.7	1.6	3.1	..	..		%	
3,546	5,692	561	494	1,436	1,845	..	..	1993	'000	2
3,595	5,707	563	491	1,463	1,913	..	..	1994		
1.4	0.3	0.4	-0.6	1.9	3.7	..	..		%	
62.3	67.4	66.8	66.8	71.5	66.3	..	..	1993	%	3
62.5	66.5	66.6	65.9	71.8	66.7	..	..	1994		
3,080	5,089	509	455	1,296	1,666	..	..	1993	'000	4
3,156	5,160	511	457	1,337	1,733	..	..	1994		
2.5	1.4	0.5	0.5	3.1	4.0	..	..		%	
15.7	17.9	19.3	18.3	16.9	17.6	..	..	1993	%	5
15.0	17.4	18.5	17.7	16.9	18.9	..	..	1994		
42.4	31.9	34.5	37.4	32.2	30.4	..	..	1993	%	6
41.0	32.7	34.3	36.6	31.6	29.7	..	..	1994		
467	604	52	40	139	179	..	..	1993	'000	7
438	547	52	34	126	180	..	..	1994		
-6.0	-9.4	-0.6	-13.1	-9.9	0.4	..	..		%	
13.2	10.6	9.3	8.0	9.7	9.7	..	..	1993	%	8
12.2	9.6	9.2	7.0	8.6	9.4	..	..	1994		
7.2	5.5	4.3	3.4	4.1	4.3	..	..	1993	%	9
6.4	5.0	4.1	3.0	3.3	3.9	..	..	1994		
										10
10.3	8.9	7.6	7.0	9.0	8.0	..	..	1993	%	
10.1	8.4	6.8	6.7	7.2	8.4	..	..	1994		
12.8	10.2	8.8	7.8	9.2	9.5	..	..	1993	%	
12.0	9.2	8.6	6.8	8.2	9.1	..	..	1994		
13.0	10.6	9.2	8.0	9.5	9.6	..	..	1993	%	
12.0	9.5	9.0	7.0	8.4	9.3	..	..	1994		
15.8	13.1	12.2	11.3	11.7	12.0	..	..	1993	%	
14.8	12.0	11.7	10.1	10.6	12.0	..	..	1994		
16.8	14.0	12.3	10.9	14.5	12.5	..	..	1993	%	
14.7	13.5	13.4	9.1	12.5	11.3	..	..	1994		
14.6	11.0	9.9	8.5	9.9	10.1	..	..	1993	%	
13.2	10.0	9.5	7.5	8.7	9.6	..	..	1994		
16.4	13.9	13.0	12.2	12.6	12.7	..	..	1993	%	11
15.3	12.8	12.5	10.9	11.5	12.5	..	..	1994		
34.2	33.4	26.8	23.1	24.5	23.9	..	..	1993	%	12
34.2	32.4	26.3	22.5	22.0	23.8	..	..	1994		

See Notes and definitions at end of table.



## Key labour and income facts

No.	Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Other labour market indicators</b>							
13*	Employment/population ratio for persons aged:						
- 15 to 24	%	1993	52.3	31.3	51.3	46.9	47.0
		1994	52.5	32.4	53.3	48.4	46.0
- 25 to 64	%	1993	70.4	53.7	65.6	63.5	64.0
		1994	70.9	53.3	66.5	64.6	64.1
- 65 and over	%	1993	6.1	--	--	--	--
		1994	6.4	--	--	4.4	--
14*	Employment by major class of worker:						
- employees	'000	1993	10,958	165	44	315	267
		1994	11,180	164	46	325	267
- self-employed	'000	1993	1,984	28	10	52	37
		1994	2,055	30	10	54	40
15*	Men working full time, full year						
	'000	1992	5,091	65	19	132	118
		1993	5,100	69	19	138	113
Women working full time, full year		'000	1992	48	13	96	82
		1993	3,456	49	14	97	75
16*	Days lost per full-time worker per year through illness or for personal reasons						
	days	1993	9.2	9.5	--	9.7	8.4
		1994	9.1	9.2	--	9.4	8.6
17	Proportion of paid workers absent two or more consecutive weeks because of illness or accident						
	%	1992	5.6	4.1	4.0	5.4	6.0
		1993	5.8	4.8	4.6	6.1	5.5
18*	Workers receiving Workers' Compensation for time-loss injuries						
	'000	1992	456	8	2	12	10
		1993	423	6	2	13	6
	Change	%	-7.1	-21.5	-4.7	9.4	-43.6
19*	Help-wanted index (1991=100)						
		1993	87	82	117	88	89
		1994	97	90	113	95	99
<b>Unemployment insurance</b>							
20	Total beneficiaries						
	'000	1992	1,388	81	16	65	67
		1993	1,292	71	16	63	65
	Change	%	-6.9	-13.1	0.8	-2.4	-2.1
21	Regular beneficiaries without reported earnings						
	'000	1992	1,006	63	11	46	51
		1993	931	56	11	44	49
	Change	%	-7.4	-12.2	-0.3	-3.4	-4.4
<b>Earnings (including overtime) and hours</b>							
22	Average weekly earnings in current dollars						
	\$	1992	549.80	510.65	444.70	491.10	494.39
		1993	559.24	526.86	453.74	495.80	503.30
	Change	%	1.7	3.2	2.0	1.0	1.8
23	Average weekly earnings in 1986 dollars						
	\$	1992	429.20	418.22	350.43	391.31	395.51
		1993	428.87	424.54	350.92	390.39	397.55
	Change	%	-0.1	1.5	0.1	-0.2	0.5
24	Average weekly earnings of salaried employees in current dollars						
	\$	1992	691.04	621.71	599.84	621.34	624.15
		1993	705.03	641.80	608.24	620.64	637.67
	Change	%	2.0	3.2	1.4	-0.1	2.2
25	Average weekly earnings of salaried employees in 1986 dollars						
	\$	1992	539.45	509.18	472.69	495.09	499.32
		1993	540.67	517.16	470.41	488.69	503.69
	Change	%	0.2	1.6	-0.5	-1.3	0.9

See Notes and definitions at end of table.

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
13										
47.0	53.9	58.5	55.6	58.4	57.8	..	..	1993	%	
48.4	52.9	59.1	55.6	59.7	57.7	..	..	1994		
65.4	72.9	74.7	76.8	75.3	72.6	..	..	1993	%	
66.4	72.9	74.5	76.9	76.7	73.0	..	..	1994		
4.1	6.9	7.8	13.1	9.1	5.1	..	..	1993	%	
4.0	7.3	7.6	12.3	8.5	6.5	..	..	1994		
14										
2,638	4,353	420	340	1,050	1,365	..	..	1993	'000	
2,711	4,397	425	343	1,079	1,424	..	..	1994		
427	711	84	106	234	295	..	..	1993	'000	
433	747	82	106	250	304	..	..	1994		
1,237	1,999	199	187	510	624	..	..	1992	'000	
1,226	1,973	214	185	524	641	..	..	1993		
825	1,393	133	108	325	401	..	..	1992	'000	
835	1,363	130	108	331	453	..	..	1993		
10.2	8.9	9.6	8.5	8.0	9.2	..	..	1993	days	
9.9	8.7	8.5	8.1	7.4	10.5	..	..	1994		
5.9	5.2	7.8	3.8	5.9	5.8	..	..	1992	%	
6.3	5.5	5.5	4.3	4.5	7.1	..	..	1993		
17										
146	137	17	12	32	78	--	1	1992	'000	
135	125	15	12	30	77	--	1	1993		
-7.5	-8.6	-7.3	2.4	-7.8	-1.8	--	9.5		%	
92	86	91	83	80	84	..	..	1993		
100	101	103	99	89	86	..	..	1994		
19										
433	400	40	31	97	154	2	2	1992	'000	
404	365	37	29	90	146	2	2	1993		
-6.5	-8.8	-6.7	-4.8	-6.8	-5.2	33.7	-5.6		%	
322	284	26	21	69	108	1	2	1992	'000	
302	257	24	20	63	101	2	2	1993		
-6.2	-9.5	-7.9	-7.6	-8.4	-6.6	35.9	-8.7		%	
20										
537.13	578.30	488.56	472.35	546.59	549.09	677.86	714.13	1992	\$	
543.14	591.13	492.60	473.95	554.15	561.23	678.78	705.38	1993		
1.1	2.2	0.8	0.3	1.4	2.2	0.1	-1.2		%	
417.35	448.29	385.30	371.93	432.43	431.67	..	..	1992	\$	
416.20	450.56	378.34	362.35	433.27	426.47	..	..	1993		
-0.3	0.5	-1.8	-2.6	0.2	-1.2	..	..		%	
654.66	733.38	632.38	618.11	703.25	682.99	835.62	813.88	1992	\$	
662.07	752.50	641.92	623.42	717.06	703.37	845.26	822.55	1993		
1.1	2.6	1.5	0.9	2.0	3.0	1.2	1.1		%	
508.67	568.51	498.72	486.70	556.37	536.94	..	..	1992	\$	
507.33	573.55	493.03	476.62	560.64	534.48	..	..	1993		
-0.3	0.9	-1.1	-2.1	0.8	-0.5	..	..		%	

Statistics Canada - Catalogue 75-001E



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
26	Average weekly earnings of hourly paid employees in current dollars	\$	1992	421.51	381.63	285.01	375.98	393.56
	Change	%	1993	428.70	406.10	297.56	382.35	402.62
				1.7	6.4	4.4	1.7	2.3
27	Average weekly earnings of hourly paid employees in 1986 dollars	\$	1992	329.05	312.56	224.59	299.59	314.85
	Change	%	1993	328.76	327.24	230.13	301.06	318.03
				-0.1	4.7	2.5	0.5	1.0
28	Average weekly hours of hourly paid employees	hrs	1992	30.5	33.5	30.4	31.7	33.1
			1993	30.6	33.9	30.7	31.7	33.4
29	Average weekly overtime hours of hourly paid employees	hrs	1992	0.8	0.9	0.3	0.6	0.7
			1993	0.9	1.0	0.4	0.6	0.7
<b>Major wage settlements</b>								
30*	Number of agreements		1993	512	15	3	11	3
			1994	407	9	6	14	16
31*	Number of employees	'000	1993	1,418	37	6	19	3
			1994	906	28	8	25	28
32*	Effective wage increase in base rates	%	1993	0.6	0.1	-	5.1	2.8
			1994	0.3	-	-4.1	-0.5	1.0
<b>Labour income</b>								
33	Labour income in current dollars	\$ million	1992	386.4	5.1	1.2	9.6	7.7
	Change	%	1993	396.3	5.2	1.3	9.8	7.9
				2.6	0.9	2.8	1.5	2.7
34	Labour income per employee in current dollars	\$	1992	36,300	31,200	27,700	30,400	29,900
	Change	%	1993	37,000	32,000	28,000	31,900	30,600
				1.9	2.6	1.3	4.9	2.6
35	Labour income per employee in 1986 dollars	\$	1992	28,400	25,600	21,800	24,300	23,900
	Change	%	1993	28,400	25,800	21,700	25,100	24,200
				0.1	1.0	-0.6	3.7	1.3
36*	Net income from self-employment as a proportion of money income	%	1992	5.1	3.4	6.4	3.6	4.2
			1993	5.2	4.4	7.5	4.4	4.0
<b>Earnings of full-time, full-year workers</b>								
37*	Average earnings of men working full time, full year	\$	1992	39,500	36,200	32,600	37,600	35,200
	Change	%	1993	39,400	34,700	31,300	38,600	36,800
				-0.1	-4.2	-3.9	2.5	4.6
38*	Average earnings of women working full time, full year	\$	1992	28,400	25,200	26,100	24,900	24,700
	Change	%	1993	28,400	24,200	26,100	24,800	22,700
				0.1	-3.9	0.2	-	-8.0
39*	Ratio of female-to-male earnings	%	1992	71.8	69.7	80.1	66.0	70.2
			1993	72.0	69.9	83.5	64.4	61.7
<b>Family income</b>								
40*	Average family income	\$	1992	53,700	42,100	44,400	46,900	46,500
			1993	53,500	43,000	43,800	46,900	46,900
41*	Median family income	\$	1992	47,700	36,800	39,400	40,500	41,700
			1993	47,100	37,700	38,100	41,200	42,200
42*	Average income of unattached individuals	\$	1992	23,200	19,600	18,800	18,800	19,000
			1993	23,300	17,100	18,200	20,800	19,300
43*	Median income of unattached individuals	\$	1992	17,600	13,900	14,400	13,100	14,300
			1993	17,400	12,400	13,800	16,200	14,200

See *Notes and definitions* at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
429.49	436.08	365.83	336.67	387.98	441.91	494.62	576.41	1992	\$	26
435.35	444.36	369.75	336.15	398.57	446.85	472.39	556.94	1993		
1.4	1.9	1.1	-0.2	2.7	1.1	-4.5	-3.4		%	
333.71	338.05	288.51	265.09	306.95	347.41	..	..	1992	\$	27
333.60	338.69	283.99	257.00	311.63	339.55	..	..	1993		
-	0.2	-1.6	-3.1	1.5	-2.3	..	..		%	
31.5	30.6	30.0	28.3	29.3	29.2	31.0	33.1	1992	hrs	28
31.6	30.7	29.7	27.9	29.7	29.1	30.6	32.1	1993		
0.7	0.9	0.7	0.7	1.1	0.8	2.2	2.6	1992	hrs	29
0.8	1.0	0.7	0.7	1.3	0.8	1.7	2.7	1993		
119	153	18	14	56	48	..	..	1993		30
32	138	11	11	60	42	..	..	1994		
542	246	41	41	102	103	..	..	1993	'000	31
65	238	11	20	108	96	..	..	1994		
0.1	1.3	0.9	1.1	0.3	2.3	..	..	1993	%	32
1.4	0.3	1.7	1.0	-1.6	1.6	..	..	1994		
90.0	162.6	12.8	9.9	37.0	48.3	0.6	1.2	1992	\$ million	33
91.9	165.6	13.0	10.0	38.0	51.4	0.6	1.2	1993		
2.1	1.8	1.8	1.3	2.7	6.5	0.8	3.1		%	
34,600	39,100	31,600	29,600	35,000	37,000	..	..	1992	\$	34
35,200	39,500	31,900	30,100	35,800	38,600	..	..	1993		
1.8	1.0	0.8	1.7	2.3	4.4	..	..		%	
26,900	30,300	25,000	23,300	27,700	29,100	..	..	1992	\$	35
27,000	30,100	24,500	23,000	28,000	29,300	..	..	1993		
0.4	-0.7	-1.8	-1.3	1.1	0.9	..	..		%	
4.2	5.2	6.6	8.7	4.3	6.3	..	..	1992	%	36
3.8	5.2	6.8	9.3	6.8	5.6	..	..	1993		
37,300	42,200	34,900	32,700	38,700	40,900	..	..	1992	\$	37
36,100	42,200	33,800	32,100	39,600	42,500	..	..	1993		
-3.3	0.1	-3.0	-2.0	2.3	4.0	..	..		%	
27,600	30,400	24,500	23,100	27,200	28,600	..	..	1992	\$	38
26,600	31,100	25,400	24,400	27,300	28,500	..	..	1993		
-3.5	2.3	3.8	5.6	0.3	-0.5	..	..		%	
73.9	71.9	70.2	70.6	70.3	70.0	..	..	1992	%	39
73.8	73.5	75.1	76.1	69.0	67.0	..	..	1993		
48,600	58,800	50,300	48,200	54,700	56,400	..	..	1992	\$	40
47,600	58,500	50,200	47,700	56,500	55,800	..	..	1993		
43,800	52,800	43,700	41,300	47,700	50,300	..	..	1992	\$	41
42,600	52,000	44,800	42,300	49,300	49,100	..	..	1993		
21,100	26,300	18,900	20,300	22,900	23,400	..	..	1992	\$	42
20,700	25,700	20,600	21,000	22,600	25,500	..	..	1993		
15,000	20,300	14,600	14,600	17,700	20,600	..	..	1992	\$	43
15,200	20,200	17,200	15,600	17,400	19,100	..	..	1993		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
44	Average family taxes	\$	1991 1992	10,500 10,300	6,700 6,700	7,000 7,100	8,100 8,500	7,600 7,900
45	Average family income after tax	\$	1991 1992	42,600 43,400	35,000 35,500	35,800 37,200	37,000 38,400	36,700 38,600
46	Proportion below the low income cut-offs (1992 base):							
	- families	%	1992 1993	13.3 14.5	18.4 15.8	7.2 7.6	13.8 14.4	11.5 11.5
	- unattached individuals	%	1992 1993	39.7 40.8	44.5 47.9	38.1 40.0	48.5 36.2	40.3 46.3
	- persons (population)	%	1992 1993	16.8 17.9	20.7 17.9	11.4 11.6	17.8 17.2	14.0 14.8
	- children (less than 18 years)	%	1992 1993	18.9 21.3	26.4 21.3	12.3 11.3	20.5 23.0	15.6 17.7
	- elderly (65 years and over)	%	1992 1993	20.6 22.3	21.7 17.8	14.5 13.3	20.0 17.0	13.8 18.1
<b>Households and dwellings</b>								
47	Estimated number of households and dwellings	'000	1993 1994	10,247 10,387	182 183	47 48	336 332	256 255
48	Average household income	\$	1992 1993	46,800 46,600	39,500 40,200	39,400 38,900	40,600 41,700	41,500 41,900
49	Proportion of households with:							
	- VCRs	%	1993 1994	77.3 79.2	76.9 78.1	74.5 77.1	77.7 81.6	78.9 79.6
	- microwaves	%	1993 1994	79.1 81.5	72.0 76.5	76.6 79.2	79.5 83.4	82.0 84.3
	- two or more automobiles	%	1993 1994	23.8 22.0	14.8 10.9	25.6 22.9	19.4 20.2	21.5 20.0
	- vans & trucks	%	1993 1994	28.4 29.9	33.5 37.2	34.0 37.5	27.7 30.4	36.7 37.6
	- air conditioners	%	1993 1994	25.7 26.8	-- --	-- --	3.9 4.5	10.2 8.2
50	Proportion of all dwellings that are owner-occupied	%	1993 1994	64.1 64.4	78.6 79.8	74.5 72.9	72.3 71.4	76.2 78.0
51	Proportion of all owner-occupied dwellings that are mortgage free	%	1993 1994	48.3 50.3	70.6 69.2	54.3 51.4	53.1 54.0	52.8 57.8
52	Dwellings in need of repair as a proportion of all occupied dwellings	%	1993 1994	22.0 26.3	31.3 32.2	25.6 31.3	27.1 33.5	26.1 30.6
53*	Median rent-to-income ratio	%	1993 1994	22 24	16 15	20 22	24 23	19 21
<b>Labour force income profile</b>								
54	Income:							
	- number reporting	'000	1992	19,649	394	91	642	525
	- amount	\$ million	1992	486,751	7,442	1,832	13,881	10,715
	- median	\$	1992	18,600	13,800	15,900	16,200	15,200
	- Canadian index (of median income)	%	1992	100.0	74.2	85.5	87.1	81.7

See *Notes and definitions* at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
10,100	11,800	8,300	8,600	11,000	10,600	..	..	1991	\$	44
9,400	11,700	9,100	8,200	10,200	10,900	..	..	1992		
38,500	46,900	38,300	37,400	44,500	44,300	..	..	1991	\$	45
39,200	47,100	41,200	40,000	44,500	45,500	..	..	1992		
										46
14.8	11.1	14.2	13.8	16.2	13.5	..	..	1992	%	
16.8	13.2	14.3	13.5	15.1	13.9	..	..	1993		
48.9	33.6	48.3	38.3	39.8	34.1	..	..	1992	%	
48.7	36.2	42.0	35.0	42.0	37.3	..	..	1993		
18.7	14.0	19.9	18.1	20.2	17.1	..	..	1992	%	
20.8	16.0	19.1	17.4	18.3	18.1	..	..	1993		
18.3	16.2	23.3	22.8	24.2	19.8	..	..	1992	%	
21.0	21.3	25.2	23.1	20.1	21.8	..	..	1993		
28.9	15.9	23.6	12.1	24.0	20.8	..	..	1992	%	
30.0	20.0	23.0	14.5	21.3	20.5	..	..	1993		
2,688	3,765	387	361	923	1,302	..	..	1993	'000	47
2,720	3,820	397	361	928	1,344	..	..	1994		
41,900	51,800	42,500	41,200	48,000	48,000	..	..	1992	\$	48
40,500	51,500	42,800	40,900	49,600	48,500	..	..	1993		
										49
72.6	79.7	75.5	71.7	82.3	78.6	..	..	1993	%	
74.0	82.1	75.1	75.6	83.0	80.6	..	..	1994		
75.9	80.0	79.8	84.8	84.8	78.0	..	..	1993	%	
79.1	81.5	81.4	85.3	86.7	81.1	..	..	1994		
22.7	25.6	22.5	21.3	26.5	22.6	..	..	1993	%	
20.2	24.2	22.1	20.3	23.7	21.3	..	..	1994		
17.3	25.6	35.7	44.3	44.7	39.2	..	..	1993	%	
19.1	26.8	34.0	46.8	48.4	39.5	..	..	1994		
15.3	44.7	45.7	33.8	8.9	9.1	..	..	1993	%	
15.2	48.1	48.1	31.6	8.2	8.6	..	..	1994		
56.4	64.4	69.5	71.7	67.8	66.1	..	..	1993	%	50
57.0	65.1	70.3	72.3	66.4	65.6	..	..	1994		
46.3	46.6	53.9	60.6	45.7	47.1	..	..	1993	%	51
46.5	49.5	54.5	60.9	49.2	49.8	..	..	1994		
20.7	20.9	26.6	23.8	25.7	20.4	..	..	1993	%	52
24.4	26.1	35.0	28.2	28.2	21.9	..	..	1994		
21	23	22	20	23	25	..	..	1993	%	53
23	25	22	20	21	27	..	..	1994		
4,972	7,332	788	669	1,765	2,418	19	33	1992	'000	54
112,382	198,714	17,183	14,283	45,555	62,748	558	1,018	1992		
17,000	20,700	16,400	15,800	19,300	19,500	24,300	22,000	1992		
91.4	111.3	88.2	84.9	103.8	104.8	130.6	119.4	1992		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
55	Labour force income:							
	- number reporting	'000	1992	14,281	289	69	451	373
	- amount	\$ million	1992	367,898	5,806	1,375	10,280	8,075
56	Employment income:							
	- number reporting	'000	1992	13,928	273	68	438	361
	- amount	\$ million	1992	350,358	4,779	1,175	9,500	7,241
	- median	\$	1992	19,900	10,200	12,000	16,800	14,700
	- Canadian index (of median employment income)	%	1992	100.0	51.3	60.3	84.4	73.9
57	Self-employment income:							
	- number reporting	'000	1992	1,993	32	11	53	36
	- amount	\$ million	1992	21,415	255	106	684	343
58	Unemployment insurance benefits:							
	- number reporting	'000	1992	3,446	150	31	147	143
	- amount	\$ million	1992	17,541	1,027	200	780	834
<b>Economic dependency profile</b>								
59	Transfer payments:							
	- amount	\$ million	1992	90,397	2,223	513	3,266	2,693
	- economic dependency ratio (EDR)		1992	25.80	46.52	43.63	34.38	37.20
	- Canadian index (of EDR)	%	1992	100.0	180.3	169.1	133.3	144.2
	Unemployment Insurance benefits:							
	- amount	\$ million	1992	17,541	1,027	200	780	834
	- contribution to EDR	%	1992	5.01	21.50	17.05	8.21	11.52
	Family Allowance benefits:							
	- amount	\$ million	1992	2,831	64	15	92	77
	- contribution to EDR	%	1992	0.81	1.34	1.24	0.97	1.06
	Federal sales tax credits:							
	- amount	\$ million	1992	2,740	68	15	98	84
	- contribution to EDR	%	1992	0.78	1.43	1.24	1.03	1.16
	Child Tax Credit benefits:							
	- amount	\$ million	1992	2,419	65	14	85	74
	- contribution to EDR	%	1992	0.69	1.37	1.22	0.90	1.02
	Old Age Security benefits:							
	- amount	\$ million	1992	11,807	199	59	402	318
	- contribution to EDR	%	1992	3.37	4.16	5.02	4.23	4.39
	CPP/QPP benefits:							
	- amount	\$ million	1992	15,116	229	63	551	385
	- contribution to EDR	%	1992	4.31	4.78	5.37	5.80	5.31
	Other pension benefits:							
	- amount	\$ million	1992	20,154	257	78	753	483
	- contribution to EDR	%	1992	5.75	5.37	6.62	7.93	6.66
	Non-taxable income/provincial tax credits:							
	- amount	\$ million	1992	17,790	314	69	504	439
	- contribution to EDR	%	1992	5.08	6.57	5.86	5.30	6.07

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
3,500	5,353	553	486	1,384	1,778	17	29	1992	'000	55
85,877	149,875	12,471	10,075	35,582	47,071	494	915	1992	\$ million	
3,392	5,232	541	478	1,359	1,740	16	28	1992	'000	56
80,457	144,653	11,999	9,689	34,376	45,143	468	879	1992	\$ million	
19,200	22,300	17,600	15,100	19,800	20,500	23,900	23,900	1992	\$	
96.5	112.1	88.4	75.9	99.5	103.0	120.1	120.1	1992	%	
358	722	104	139	254	278	3	2	1992	'000	57
4,413	8,807	855	972	1,799	3,144	20	18	1992	\$ million	
1,037	1,054	114	91	261	407	5	6	1992	'000	58
5,419	5,223	472	386	1,207	1,929	27	36	1992	\$ million	
22,406	35,166	3,502	2,899	6,609	10,957	61	102	1992	\$ million	59
27.85	24.31	29.19	29.92	19.23	24.27	12.98	11.58	1992		
107.9	94.2	113.1	116.0	74.5	94.1	50.3	44.9	1992	%	
5,419	5,223	472	386	1,207	1,929	27	36	1992	\$ million	
6.74	3.61	3.93	3.98	3.51	4.27	5.70	4.10	1992	%	
693	1,015	119	116	295	334	3	9	1992	\$ million	
0.86	0.70	0.99	1.20	0.86	0.74	0.71	1.03	1992	%	
760	925	121	105	240	318	2	4	1992	\$ million	
0.94	0.64	1.01	1.09	0.70	0.70	0.48	0.51	1992	%	
616	784	119	121	255	274	3	9	1992	\$ million	
0.77	0.54	0.99	1.25	0.74	0.61	0.54	0.97	1992	%	
2,868	4,472	569	517	857	1,538	4	5	1992	\$ million	
3.56	3.09	4.74	5.34	2.49	3.41	0.78	0.58	1992	%	
3,499	6,146	637	561	1,092	1,942	6	5	1992	\$ million	
4.35	4.25	5.31	5.79	3.18	4.30	1.26	0.60	1992	%	
4,182	8,594	774	640	1,493	2,886	8	7	1992	\$ million	
5.20	5.94	6.45	6.60	4.34	6.39	1.69	0.82	1992	%	
4,370	8,007	692	452	1,171	1,737	8	26	1992	\$ million	
5.43	5.54	5.77	4.67	3.41	3.85	1.81	2.96	1992	%	

See Notes and definitions at end of table.

## Key labour and income facts

### Notes and definitions

No.		No.	
2	Persons aged 15 and over who are employed or unemployed.	30	Data are for agreements involving bargaining units of 500 or more employees. The total includes federal and provincial agreements.
3	The labour force as a proportion of the population aged 15 and over.	33	Labour income comprises gross wages and salaries (including directors' fees, bonuses, commissions, gratuities, taxable allowances and retroactive pay) and supplementary labour income (payments made by employers for the benefit of employees, including contributions to health and welfare schemes, pension plans, Workers' Compensation and Unemployment Insurance).
5	Persons who usually work less than 30 hours per week.	34	Labour income per employee is calculated using LFS estimates of paid workers excluding those absent without pay during the entire reference week.
8	The unemployed as a proportion of the labour force.	46	For an explanation of the methodology underlying the low income cut-offs, see <i>Income Distributions by Size in Canada</i> (Statistics Canada, Catalogue 13-207).
9	This rate and rates shown as Indicators 10 and 11 are described in <i>Perspectives on Labour and Income</i> (Statistics Canada, Catalogue 75-001E) 4, no. 4 (Winter 1992): 35-43.	53	The rent-to-income ratio refers to rent in the reference year divided by income in the previous year.
10	<p>The full-time labour force includes persons working full time, those working part time involuntarily and unemployed persons seeking full-time work.</p> <p>The part-time labour force includes persons working part time voluntarily and unemployed persons seeking part-time work.</p> <p>Discouraged workers and others on the margins of the labour force are persons who have looked for work in the past six months, but not during the reference week because they believed none was available or because they were waiting for recall or for replies from employers.</p>	54-59	<p>Data are derived from tax returns filed in the spring of the year following the reference year. The mailing address at the time of filing determines the province.</p> <p>Economic dependency ratio:</p> $\text{EDR} = \frac{\text{Total transfer payments}}{\text{Total employment income}} \times 100$ <p>(Example: An EDR of 25.80 indicates that for each \$100 in employment income earned by Canadians in 1992, an additional \$25.80 of income was received in the form of transfer payments.)</p>
11	The rate shows hours lost through unemployment (unemployed multiplied by average actual weekly hours) and through underemployment (that is, short-time work schedules and involuntary part-time employment) as a proportion of hours worked plus hours lost.		
13	The number of persons employed in an age group expressed as a percentage of the population for that age group.		
14	<p>Employees work for an employer for remuneration, usually in the form of a wage or salary.</p> <p>Self-employed workers are working owners of incorporated or unincorporated businesses with or without paid help.</p>		



# In the works

*Here are some of the topics to be featured in upcoming issues*

---

## ■ The labour market: Mid-year review

---

A look at the labour market and other economic indicators during the first six months of 1995.

## ■ Co-op graduates

---

Expecting to face a tough job market, many university students turn to co-op programs. But does this option pay off when they graduate? The Survey of 1990 Graduates, conducted in 1992, provides some answers.

## ■ Labour market outcomes of high school graduates, 1979 to 1993

---

A look at the labour market "success" of young adults aged 25 to 29 with high school education between 1979 and 1993.

## ■ Women in non-traditional work, 1986 to 1991

---

Women continued to increase their presence in non-traditional jobs in the late 1980s and early 1990s, although the pace of change was much slower than in the previous 15 years. This article explores the extent of this crossover.

## ■ Full-time employment

---

Rates of full-time employment and full-year, full-time employment are compared by province for the period 1983 to 1993.

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The quarterly for labour market and income information

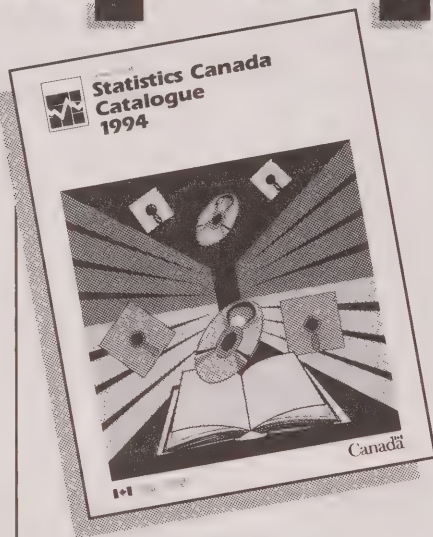
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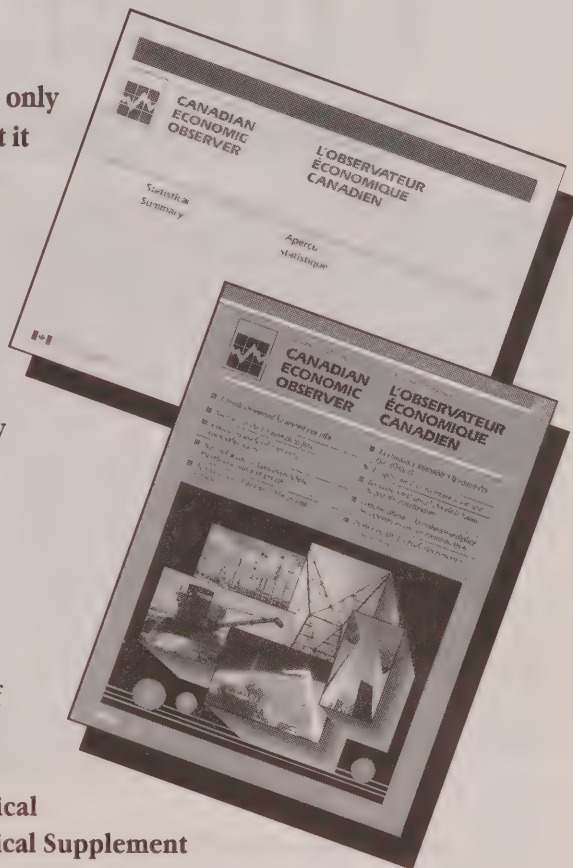
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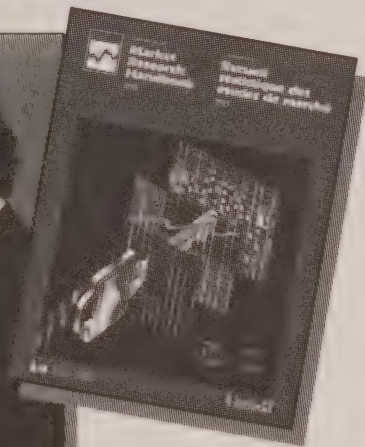
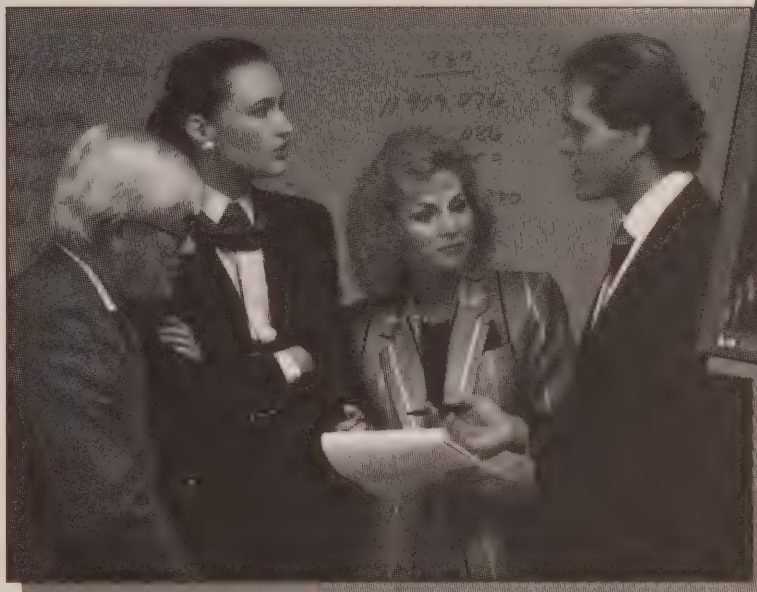
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### ■ Departments

- 3 Forum
- 5 Highlights
- 40 What's new?
- 43 Key labour and income facts
- 55 In the works

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### ■ Articles

#### SUPPLEMENT

#### The labour market: Mid-year review

*Mike Sheridan*

A look at labour market and other economic indicators during the first six months of 1995.

#### 8 Employment prospects for high school graduates

*Susan Crompton*

Since the late seventies, 25 to 29 year-olds with only a secondary school education have had more difficulty finding employment, and much more difficulty obtaining well-paid work. A glance at the changes over time in the labour market "success" of 25 to 29 year-old secondary school graduates.

#### 14 Women in non-traditional occupations

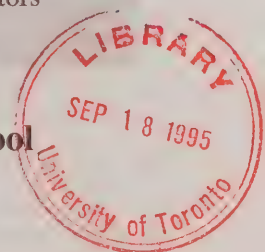
*Karen D. Hughes*

In the midst of extensive restructuring and downsizing, women have continued to enter male-dominated occupations, albeit more slowly than before. This study explores women's occupational crossovers from 1986 to 1991 and compares them with earlier developments between 1971 and 1986.

#### 20 Labour market outcomes for university co-op graduates

*Jamie Darch*

Does graduation from a university co-op program provide advantages in the job market? A comparison of graduates of university co-op programs with their non co-op counterparts.





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## ■ Editor-in-Chief

Ian Macredie  
(613) 951-9456

## ■ Managing Editor

Cécile Dumas  
(613) 951-6894

## ■ Assistant Managing Editor

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(613) 951-6893

## ■ Editors

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## 25 Full-year employment across the country

*Susan Crompton*

Has the economy lost its capacity to generate enough full-time full-year employment to keep up with the growth in the working-age population? This article examines full-time and full-year employment rates by province from 1983 to 1993.

## 30 Adult women's participation rate at a standstill

*George Butlin*

Starting in 1991, the participation rate of women has declined and shows no sign of resuming its long-standing upward trend. This note explores the rates of adult women aged 25 to 54 by different characteristics.

## 34 Recent trends in earnings

*Stephen Johnson*

In 1994, for the first time in four years, employers expanded their workforces significantly. A look at recent changes in paid employment, earnings and hours across detailed industries.

## Symbols

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# Forum

## Letter from the Editor-in-Chief

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■ In November 1994, the widely read American magazine *Business Week* published a cover story entitled "The real truth about the economy: How government statistics are misleading us." Needless to say, the article generated considerable interest at Statistics Canada, precipitating a review of various programs and the potential for the statistics produced to be misleading. Of course, there are two dimensions to "misleading": a statistical value may be inaccurate and so mislead the user, or it may be perfectly accurate but be misunderstood by the user. In the second case, the statistic misleads because the user has not been properly educated or informed about the nature and limitations of the data.

The *Business Week* article dealt with the first dimension of "misleading," but the second is almost equally important. One of *Perspectives'* principal objectives has been to foster an understanding of statistics. In fact, evading the opportunity would be almost irresponsible, since data on employment and income are among Statistics Canada's most visible measures: they are widely reported and commented upon, but sometimes not fully understood.

Worries about the accuracy of employment measures often surface when people are feeling jittery about the economy. During a recession or a slow recovery, the official unemployment rate is sometimes assailed as misleading, since it excludes people who are not looking for work because they believe none is available (discouraged workers), and it does not calculate the extent to which workers with jobs are underemployed (working fewer hours than preferred). But a single measure of unemployment cannot possibly suit all applications; nor is it intended to. Indeed, the official unemployment rate is only one of many unemployment estimates available. One of these alternative rates includes discouraged workers and others on the margins of the labour force; another rate explicitly addresses underemployment by including part-time workers who want full-time employment (unemployment rate of the full-time labour force). However, it is simply not widely known that Statistics Canada regularly publishes a number of other unemployment measures in *Perspectives'* "Key labour and income facts."

Income statistics can also seem misleading because they measure only money income, not economic well-being. While the two are often synonymous in the public's mind, there is a difference. For example, do two families with the same income really enjoy the same

level of economic well-being when one owns a mortgage-free house and the other rents? Most people would probably say no, but our income statistics do not capture the implied value of owner-occupied housing. Similarly, are lone mothers and postsecondary students living below the low income cut-offs equally disadvantaged, when many of the students are probably receiving financial or other support from their parents? Again, most people would probably say no, but our income statistics do not measure transfers between family members.

Some misunderstandings stem from public perceptions that are based on expectations and beliefs beyond the statistician's capacity to quantify. For example, it is widely believed that the middle class is disappearing, yet our income data provide little support for this conviction. Sceptics question the accuracy of published statistics, pointing to indirect or circumstantial evidence of decline – reports that employers are shedding their middle managers, job security is growing precarious, employment in highly paid blue-collar occupations is declining, and recent university graduates are spending months fruitlessly searching for work. The disparity between popular perception and statistical data may lie in an incorrect diagnosis of the problem: the disappearance of the middle class is not really an income issue, but an "expectations" issue. In other words, income statistics are misunderstood because of a clash between what people believe it means to be middle class – having a steady job, owning their home, knowing their children will find work when they graduate – and the purpose of the data, which is to count the dollars families receive during the year. Certainly the data are limited, but they are not misleading.

*Perspectives* takes very seriously its mandate to help readers understand the nature and limitations of the data presented. Its two articles on labour productivity, published in Spring 1993 and Spring 1995, are clear examples of *Perspectives'* educative function in action. Most often, this mandate is fulfilled in more humble fashion: almost every article carries a separate "box" entitled *Data source and limitations*, or something similar. Some of the discussions pertaining to the data underlying the analysis may seem pedantic, but we consider them necessary. We also provide authors' telephone numbers so queries about the data and analytical findings can be answered. By informing our readers, we hope to prevent "misunderstood" statistics from being transformed into "misleading" statistics.

If you as a reader have ever been baffled by data released by Statistics Canada, or encountered issues for which there are no statistics, please let us know. It may be time for *Perspectives* to address them.

Ian Macredie  
Editor-in-Chief



**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

Statistics Canada reserves the right to select and edit items for publication. Correspondence, in either official language, should be addressed to: Susan Crompton, Forum and What's new? Editor, *Perspectives on Labour and Income*, 5-D Jean Talon Building, Statistics Canada, Ottawa K1A 0T6. Telephone (613) 951-0178; fax (613) 951-4179.



# Highlights

## ■ Employment prospects for high school graduates ... p. 8

- Since the late 1970s, 25 to 29 year-olds with only a secondary school education have had increasing difficulty finding employment and obtaining well-paid work. As expected, economic conditions affected the proportions of those employed and working full year full time; more striking is the decline (in real terms) in their average earnings between 1979 and 1993.
- In 1979, high school-educated men in that age group working full year full time had average earnings of \$35,250 (1993 dollars). Ten years later, despite similar economic conditions (expansionary peak year), young men with the same characteristics earned 10% less than their older counterparts had at the same age. By 1993, the situation was no better. Young men with the same educational attainment working full year full time earned \$29,000, compared with \$33,000 in 1984 (another early year of labour market recovery).
- In 1989, young high school-educated women working full year full time earned less than their older counterparts had ten years earlier (\$21,750 versus \$24,750). Average earnings for a comparable group in 1993 had also declined from a similar period of labour market recovery in 1984.
- For comparison, university graduates of the same age were briefly examined. For young men working full year full time, the labour market situation had deteriorated so much that in 1993, even those with a university degree earned little more, in real terms, than those with a high school diploma in the late 1970s.

## ■ Women in non-traditional occupations ... p. 14

- In this article, an occupation is defined as non-traditional for women if their representation in it during a particular year was below the proportion of women in the experienced labour force that same year. Where this representation fell below half the proportion, an occupation is classified as "highly" non-traditional.

- Between 1986 and 1991 women's presence increased in a number of highly non-traditional occupations. The greatest increases over this five-year period were found among optometrists, occupations related to services management and financial management, and osteopaths and chiropractors.
- In line with these changes the educational attainment of women continued to rise over the period; by 1991, over 40% of female workers had some postsecondary education, and nearly 14% had at least some university. As well, women were obtaining a growing share of university degrees in non-traditional areas such as commerce, law, biological sciences, agriculture, dentistry, medicine and veterinary medicine.
- Eighteen of the twenty-two fastest-changing highly non-traditional occupations generated full-year full-time median employment incomes above those of female workers overall, ranging from \$25,500 to \$41,700. The median figure for all highly non-traditional occupations was \$29,600, compared with \$24,500 for all women working a full schedule.
- The proportion of women in traditionally female occupations fell from 86% in 1971 to 79% in 1986. This percentage had improved only marginally by 1991, with 78% of female workers still concentrated in over one-quarter of all occupations.

## ■ Labour market outcomes for university co-op graduates ... p. 20

- Over 95,000 students earned bachelor's degrees in 1990. Of these graduates about 4,200 had been enrolled in a co-op program. Most co-op graduates obtained their degrees in one of three fields: engineering; mathematics and physical sciences; and commerce and economics.
- A high proportion of all graduates in these fields, both co-op and non co-op, working full time in 1992 had obtained jobs related to their studies.
- A statistical model showed that a co-op education had a significant effect on earnings for mathematics and physical science graduates, as well as degree holders in commerce and economics: an estimated \$5,490 and \$3,700 advantage in average expected annual earnings, respectively.

- An important factor in graduates' earnings was the work experience gained, whether through a co-op program or not.

## ■ Full-year employment across the country ... p. 25

- Over the past decade, new types of work arrangements have become more common and it may seem that full-time year-round work is harder to find. But on the whole the economy has not lost its capacity to generate enough "steady" employment to keep up with the growth in the working-age population. However, the availability of steady employment varies by region and stage of the business cycle. This article discusses trends in full-year employment in all provinces over a complete business cycle, divided into two time periods: recovery and expansion (1983 to 1989), and recession and initial recovery (1990 to 1993).
- Between 1983 and 1989, the Atlantic provinces all recorded full-year full-time employment gains, with New Brunswick recording the highest increase (6.5 percentage points). Between 1989 and 1993, the region lost some of its gains. Nevertheless, the region's full-year full-time employment rates were higher coming out of the recession in 1993 than they had been in 1983. The improvement was especially marked in Prince Edward Island, whose rate was 4.4 percentage points higher (33.0% in 1993), and New Brunswick (up 4.3 percentage points to 33.4% in 1993).
- Full-year full-time employment rates increased 6.3 percentage points in Quebec between 1983 and 1989. The province lost most of these gains between 1989 and 1993, ending the period with a rate of 37.6%.
- Ontario increased its full-year full-time employment rates 7.0 percentage points between 1983 and 1989. But its losses in the recession made it the only province to have a lower rate in 1993 (41.6%) than a decade earlier.
- The western provinces all increased their full-year full-time employment rates between 1983 and 1989, with Alberta recording the highest rate at 47.4% in 1989. Between 1989 and 1993, all four provinces lost some of their gains, but came out of the recession with rates higher than 10 years before. Alberta suffered the biggest setback (3.2 percentage points); as a result, its full-year full-time employment rate had dropped to 44.2% by 1993.

## ■ Adult women's participation rate at a standstill ... p. 30

- For several decades women's labour force participation increased each year without exception. Until 1991, the participation rate and employment of women aged 25 to 54 grew in tandem, regardless of economic conditions. However, since 1991, their employment levels have maintained a steady, upward trend while participation rates have fluctuated – declining in 1992, rising the following year and falling again in 1994. As a result, the participation rate of adult women in 1994 matched that of 1990 (75.7%), while their employment level rose 6.8%.
- This study breaks down the overall participation rate of 25 to 54 year-old women into rates by age, marital status, employment status of husband, presence and age of children, educational attainment and province, in order to identify which, if any, of these groups account for the failure of the participation rate to resume its earlier path.

## ■ Recent trends in earnings ... p. 34

- Although the number of employees increased significantly in 1994, their average earnings rose by less than 2% for a second consecutive year, reaching \$567.11 per week.
- The relative change in earnings varied widely from industry to industry. The year-to-year variation in average weekly earnings ranged from a decline of 0.4% in educational and related services to an increase of close to 7% in real estate and insurance agencies.
- Longer hours in 1994 explain part of the rise in earnings. For example, in construction alone employees earned on average 2.8% more than in 1993 but also recorded the longest average work week since 1990, partly due to a surge in overtime.
- In response to higher demand for their products, employment grew in manufacturing and weekly earnings rose by 2.4%. Again, much of the rise is linked to longer hours. The industry accounted for more than half of the overall increase in total paid overtime (about 300,000 hours more than in 1993).
- By contrast, average weekly earnings for the nearly three million employees in government, education and health and social services rose only 0.4% in 1994, restraining the overall earnings growth.



## ■ What's new ?

... p. 40

- The publication *Annual Estimates of Employment, Earnings and Hours, 1983 to 1994* looks at average weekly and hourly earnings, payrolls and so on, by detailed industry at the national, provincial and territorial levels.
- The 1994 General Social Survey (Cycle 9) gathered information on the education, work and retirement of Canadians (repeating content first covered in the 1989 General Social Survey), as well as their social origins and work interruptions. Data are now available in several formats: an information package containing a general overview; a fact sheet on computers in the workplace; and a public use microdata file.
- Results of the 1994 Adult Education and Training Survey are now available in a public use microdata file. Data were collected on employer-related and other training.
- *Projections of Canada's Population with Aboriginal Ancestry, 1991-2016* is now available. The report presents the demographic characteristics of the population for 1991 and projects estimates up to 2016 based on three hypothesized growth scenarios (slow, medium and rapid).
- *A Profile of Canada's Visible Minority Population* and *A Profile of Persons with Disabilities (Limited at*

*Work/Perception*) contain detailed 1991 data. These diskettes provide an extensive array of demographic and socioeconomic variables, as well as user-friendly software for tables and charts.

- The Analytical Studies Branch has released three studies based on its survey of the impact of globalization and increased competition on small and medium-sized firms. *Business Strategies in Innovative and Non-innovative Firms in Canada* examines the differences in policies pursued by innovative and non-innovative firms. *Human Capital Development and Innovation: The Case of Training in Small and Medium-sized Firms* investigates the factors that influence a firm's decision to train employees, and its expenditures on that training. *Innovation: The Key to Success in Small Firms* looks at some of the factors that contribute to the growth of small and medium-sized firms.

## ■ Key labour and income facts ... p. 43

- In this issue numbers for employed full-time workers are included in indicator no. 4.
- Now available are 1994 statistics for "Unemployment insurance," "Earnings (including overtime) and hours" and "Labour income." Under "Family Income" the latest 1993 figures are provided for average family taxes and average family income after tax. □

### Perspectives on Internet

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# Employment prospects for high school graduates

Susan Crompton

Not so many years ago high school was widely seen as the end of the educational road for most Canadians. It was all that was needed to get a good job. Now, conventional wisdom asserts that it is next to impossible for secondary school graduates to find well-paid employment, if they can find employment at all.

Conventional wisdom seems to be supported by experience. Since the late seventies, 25 to 29 year-olds with only a secondary school education have had increasing difficulty finding steady employment, and even more difficulty obtaining well-paid work. Indeed, many entry-level jobs previously filled by such graduates now require a postsecondary education. Yet in spite of such evidence in support of further education, high school graduates still account for a substantial portion (43% in 1993) of persons in this age group.

This article uses cohort analysis to examine the change over time in the labour market "success" of 25 to 29 year-old secondary school graduates (see *Who's who*). Three indicators of success are used: the employment rate; average earnings; and the unemployment rate. Four years are analyzed: 1979 and 1989 (peak years in two successive business cycles, when national unemployment rates were 7.4% and 7.5%, respectively); and 1984 and 1993 (the early years of labour market recovery following deep recessions, when unemployment rates were 11.2%). All earnings data are in 1993 dollars (see *Data sources and definitions*).

Susan Crompton is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-0178.

## Young men in crisis?

In 1979, the Canadian economy was at the peak of a four-year economic expansion, and life was good for 25 to 29 year-old men with a secondary school education (Cohort 1). These men had been in the labour market for at least 5 years, some for more than 10. Some of the older members of this cohort may have had trouble finding or keeping jobs in the early to mid-1970s, during the brief recession of 1974-75. However, most would have had time to settle in the workplace by 1979. Indeed, fully 91% of the young men in Cohort 1 were employed in 1979, and earned an average of \$32,000 (1993 dollars). More importantly, most of them (75%) were working full year full time, with average earnings of \$35,250. Their unemployment rate stood at only 6.5% (Table 1).

In 1989, economic conditions were similar to those prevailing 10 years before, but young men with only a secondary school education were not faring as well. Many members of Cohort 3 had entered the labour market during a difficult time marked by a recession and recovery, just as Cohort 1 had done, but the 1981-82 recession was more severe than the brief slowdown of the mid-1970s. Among Cohort 3's setbacks were a somewhat lower employment rate than that of Cohort 1 a decade earlier, and substantially lower average earnings (Chart A). Furthermore, although the economy was in a prolonged boom, a smaller proportion of the young men in Cohort 3 (69%) were employed full year full time. For those who did work the entire year, average earnings were also down from those of Cohort 1.

## Who's who

This article examines successive groups of high school graduates aged 25 to 29 (each group forming a cohort). This age range, rather than 20 to 24 years, was selected because most people have settled into the job market by their mid to late twenties but

their work experience does not yet influence earnings significantly.

The cohorts of graduates examined in this study are defined for specific years as follows:

	1979	1984	1989	1993
	Age group			
Cohort 1	25-29	...	35-39	...
Cohort 2	...	25-29	...	34-38 *
Cohort 3	...	...	25-29	...
Cohort 4	...	...	...	25-29 **

\* Because 1984 to 1993 (most recent earnings data available) spans nine years, the age of the cohort must be adjusted accordingly.

\*\* Members of Cohort 3 who were aged 25 in 1989 may be found in Cohort 4 as 29 year-olds.

## Data sources and definitions

Data are from the Labour Force Survey (LFS) and the Survey of Consumer Finances (SCF), which is conducted as a supplement to the LFS.<sup>1</sup> The bulk of this study focuses on four cohorts of 25 to 29 year-olds with secondary schooling only (Cohorts 1 to 4); four additional cohorts of 25 to 29 year-old university graduates are briefly examined (see *University graduates*).

Strictly speaking, the secondary school cohorts should not be referred to as "graduates," because their educational qualification is "having completed 11 to 13 years of schooling."<sup>2</sup> LFS data explicitly confirming graduation were not collected until 1990, when the educational attainment question was expanded into "some secondary, 11 to 13 years" and "graduated from high school." However, to maintain consistency of educational attainment for the two cohorts affected by the change (1989 and 1993), this study rolls the two new categories back into one, to include both graduates and non-graduates in 1989 and 1993.<sup>3</sup>

Another limitation arises from the changes to the LFS educational attainment questions. Prior to 1990, persons with trades certificates or diplomas from vocational schools or from apprenticeship training programs were considered to have secondary credentials only. From 1990 onwards, they

were identified as having postsecondary qualifications. This means that the first two cohorts of high school completers include an unidentifiable number of workers (both with and without high school graduation) who have such qualifications. Therefore, to maintain as much consistency as possible across the break in the data series, persons with trade/vocational or apprenticeship certificates are included in the last two cohorts.<sup>4</sup> Although Cohorts 1 and 2 are not exactly comparable with Cohorts 3 and 4, any differences are unlikely to affect this study's findings.

## Definitions

**Cohort:** persons of the same age range with the same level of education grouped together, usually for the purpose of studying specific characteristics (for example, unemployment rates) over time.

**Secondary/high school graduates:** persons with 11 to 13 years of formal schooling, but without postsecondary training normally requiring high school graduation (for example, college or university).

**Employment rate:** the percentage of a population group (for example, male 25 to 29 year-olds with a secondary school education) that is employed either full or part time during a reference week. In this article, employment rates are annual LFS averages.

**Full-year full-time employment rate:** the percentage of a given population that is employed full year full time, that is, works mostly 30 hours or more per week for 49 to 52 weeks in the calendar year; occasionally referred to as the *full-year employment rate*. Full-year full-time employment rates are calculated from SCF estimates.

**Unemployment rate:** the percentage of persons in the labour force who are unemployed. The labour force consists of the employed and the unemployed (persons looking for work or on temporary layoff or with a job starting within four weeks and not already working and available for work). The unemployment rates used in this study are annual LFS averages.

**Earnings:** income from wages, salaries, tips and commissions, and net income from self-employment. All earnings data have been converted to 1993 dollars and rounded to the nearest \$250. *Average earnings* are calculated by dividing workers' total earnings in the calendar year (obtained from both full- and part-time work, as well as full- and part-year employment) by the number of workers reporting earnings. *Average full-year earnings* estimate the average earnings of workers employed full year full time in the calendar year. (Workers with negative earnings, that is, net losses from self-employment, are excluded from these calculations.) Earnings data are provided by the SCF.

In both 1984 and 1993, the labour market was in early recovery following a deep recession. However, most of the young men in Cohorts 2 and 4 would have entered the job market before the recession; the majority probably entered during the preceding expansionary period. But in 1984, the unemployment rate of young men with a high school education was 12.6% (Cohort 2). Only 83% of them were employed, and they earned \$27,250 on average. Earnings were about

21% higher for full-year full-time workers, but the rate of full-year employment in Cohort 2 was low, at 63%.

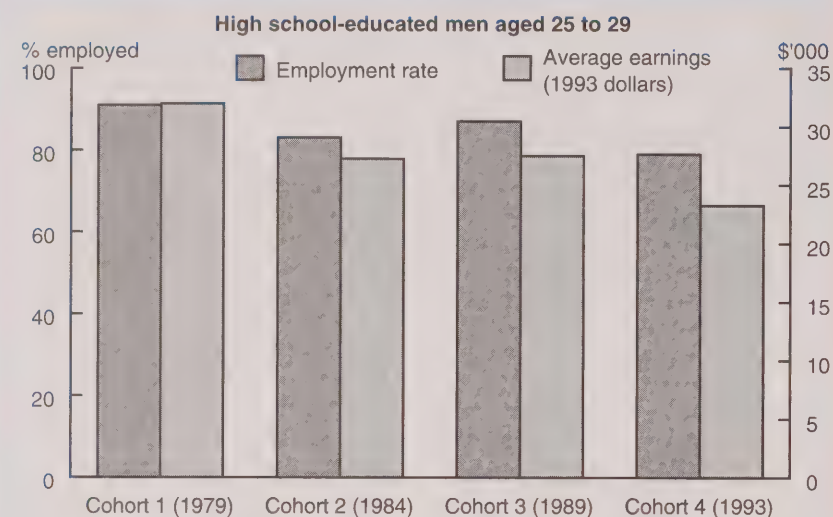
By 1993, the situation had deteriorated further for young men. Many in Cohort 4 would have joined the workforce in the mid to late 1980s when the number of jobs was growing rapidly. But it seems that employment opportunities or career advancement, or both, were lacking.<sup>5</sup> In 1993, the unemploy-

ment rate for men in Cohort 4 had reached 15.0% and their rate of employment was below that for men in Cohort 2, who had faced a similar economic climate in 1984. More telling were Cohort 4's average earnings of \$23,250, which were 15% lower than those of Cohort 2 at the same age. The labour market situation was no better among men working full year full time: Cohort 4's employment rate was down to 59%, and average earnings were 12% lower.



Chart A

**Although men's employment rates and earnings varied with labour market conditions, they tended to diminish over time.**



Sources: Survey of Consumer Finances and Labour Force Survey

## Young women also lose ground

Ages 25 to 29 are the principal childbearing years, when many women with young children choose to work part time or part year, or withdraw from the labour force altogether. For this reason, their labour market experience should not be directly compared with that of men the same age; nor should assumptions be made based solely on the economic conditions prevailing at the time they entered the labour force.

In 1979, 58% of young women with a secondary school education (Cohort 1) were employed, with average earnings of \$18,250. Women working full year full time – 52% of the women in Cohort 1 – made \$6,500 more (Table 2).

In 1989, the average earnings of employed Cohort 3 women were down 7% compared with Cohort 1, although their rate of employment

had risen to 68% (Chart B).<sup>6</sup> The full-year employment rate was up modestly for Cohort 3,<sup>7</sup> while earnings were much lower (-12%).

In 1984, the young women in Cohort 2 faced a labour market

struggling toward recovery. The rate of employment for all women in the cohort was 60%, but the rate of full-year full-time work was only 46%. Average earnings for all employed women in Cohort 2 were \$17,000, about 28% less than for women employed full year full time.

In 1993, the women in Cohort 4 recorded the highest unemployment rate of any of the female cohorts studied (13.9%). On the other hand, their employment rate was higher than it had been for Cohort 2, even though earnings had shrunk 6%. Earnings of full-year workers had also dropped (-9%), while their rate of full-year employment was the same as it had been for young women nine years earlier.

## Work experience has little impact

Employment stability and earnings often rise with experience; therefore, one would expect employment rates and earnings to increase with age. But it is not clear that work experience improves the position of workers with a high school education only.

**Table 1**  
**Labour market success of men aged 25 to 29 with a high school education, selected years**

	Employment rate			Average earnings	
	All workers	Full-year full-time workers	Unemployment rate	All workers	Full-year full-time workers
	%			(1993 \$)	
Cohort 1 (1979)	91	75	6.5	32,000	35,250
Cohort 2 (1984)	83	63	12.6	27,250	33,000
Cohort 3 (1989)	87	69	8.5	27,500	31,750
Cohort 4 (1993)	79	59	15.0	23,250	29,000

Sources: Survey of Consumer Finances and Labour Force Survey



**Table 2**  
**Labour market success of women aged 25 to 29 with a high school education, selected years**

	Employment rate			Average earnings	
	All workers	Full-year full-time workers	Unemployment rate	All workers	Full-year full-time workers
	%			(1993 \$)	
Cohort 1 (1979)	58	52	9.4	18,250	24,750
Cohort 2 (1984)	60	46	12.6	17,000	23,500
Cohort 3 (1989)	68	56	10.3	17,000	21,750
Cohort 4 (1993)	64	46	13.9	16,000	21,500

Sources: Survey of Consumer Finances and Labour Force Survey

In 1989, when Cohort 1 was aged 35 to 39, employment rates were slightly lower for men but 14 percentage points higher for women than they had been 10 years earlier. Both sexes recorded increases in full-year full-time employment rates. Average earnings were 10% higher for men in 1989 than in 1979, and 12% higher for women (Table 3).

The position of both men and women in Cohort 2 appears to have improved as they grew older. In 1993, rates of total and full-year full-time employment were higher than they had been nine years earlier, and average earnings had risen by 19% for men and 9% for women.

Despite Cohort 2's gains, the first cohort maintained its better labour market position as the years passed: in 1989, Cohort 1's employment rates and earnings (for both total and full-year full-time workers of either sex) still exceeded those of Cohort 2 in 1993.

### Men are more likely to have blue-collar jobs ...

Young high school-educated men were more likely to be employed in one of the major blue-collar occupations (product fabricating, assembling and repairing, con-

struction trades, and transport equipment operating) in 1993 than in 1984 – 50% of Cohort 4 compared with 43% of Cohort 2.<sup>8</sup> The gap between the cohorts was even greater among full-year full-time workers (49% versus 40%). These occupations have traditionally been highly unionized and well-

paid. The decline in earnings observed among the later cohorts may be due to lower entry level wages, possibly as a result of wage concessions made by unions under pressure to save jobs.<sup>9</sup>

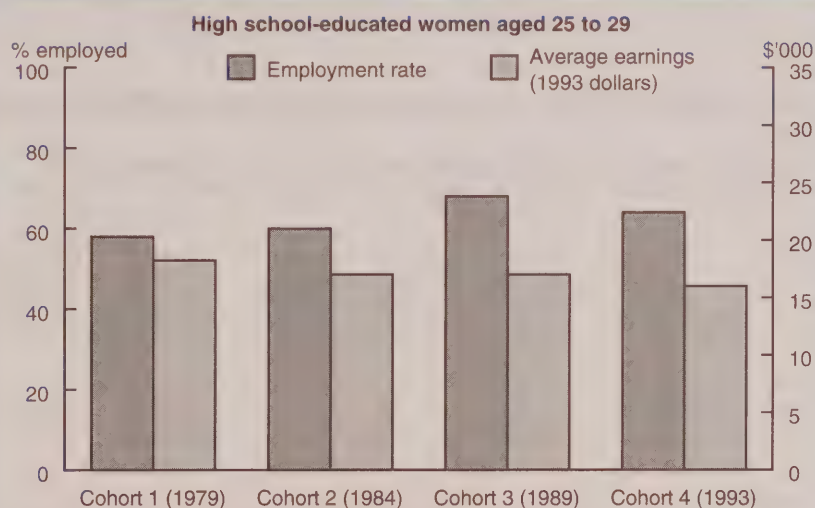
### ... while women are making inroads in different areas

Compared with young men, the occupational profile of high school-educated women aged 25 to 29 was changing between 1984 and 1993. These young women were leaving clerical jobs (down from 47% to 36%) and moving into service (up from 16% to 24%), and managerial and administrative (from 9% to 12%) occupations.

### Summary

Since the late 1970s, young adults completing high school and hoping to find steady employment have faced greater challenges. Among 25 to 29 year-olds, who have reached an age when the transition from

**Chart B**  
**Women's employment rates have generally been rising while average earnings have dropped.**



Sources: Survey of Consumer Finances and Labour Force Survey

## University graduates<sup>10</sup>

High school graduates were not alone in facing deteriorating labour market conditions. The average earnings of 25 to 29 year-old men with university degrees fell 15% from 1979 to 1984. And although their total employment rate fell only marginally, the proportion of these men working full year full time declined six percentage points, to 65%. By 1989, employment rates had mostly recovered, only to fall back again in 1993. At the same time, average earnings continued to shrink for all male workers between 1984 and 1993, while earnings of full-year workers eventually stabilized (Table).

The labour market position of university-educated women differs somewhat from that of their male counterparts. Between 1979 and 1989, women aged 25 to 29 with degrees saw moderate gains in employment rates, although they dipped slightly in 1993. Average earnings for these women were more stable than men's. In 1993, the average earnings of all female workers were virtually the same as in 1979, while the earnings of full-year workers had improved slightly (up 3%).

In contrast to secondary school graduates, work experience substantially improved the labour market situation of university graduates. In

1989 and 1993, both men and women with university degrees were more likely to be working (especially full year) than they had been a decade earlier. Over this period, total and full-year employment rates improved more for degree holders than for those with a high school education only (except for university women's total rates). University graduates were amply rewarded for

their work experience, in comparison with the monetary gains seen among high school graduates (Cohorts 1 and 2 in Table 3). Between 1979 and 1989, the average earnings of both men and women with degrees rose 42%; similarly, between 1984 and 1993, men's earnings increased 45% and women's, 26%.

### Labour market success of university graduates aged 25 to 29, selected years

	Employment rate			Average earnings	
	All workers	Full-year full-time workers	Unemployment rate	All workers	Full-year full-time workers
		%		(1993 \$)	
<b>Men</b>					
Cohort 1 (1979)	90	71	4.1	37,750	45,000
Cohort 2 (1984)	88	65	6.1	32,000	40,500
Cohort 3 (1989)	90	69	4.1	30,250	36,750
Cohort 4 (1993)	85	68	6.8	29,250	36,750
<b>Women</b>					
Cohort 1 (1979)	76	56	5.7	25,000	32,000
Cohort 2 (1984)	79	58	7.5	25,500	32,750
Cohort 3 (1989)	84	59	5.1	25,000	32,250
Cohort 4 (1993)	82	57	7.1	24,750	33,000
One decade later					
<b>Men</b>					
Cohort 1 (1989)	95	88	3.0	53,500	57,000
Cohort 2 (1993)	92	81	5.5	46,500	52,000
<b>Women</b>					
Cohort 1 (1989)	82	64	4.3	35,500	42,000
Cohort 2 (1993)	82	65	6.2	32,250	41,250

Sources: Survey of Consumer Finances and Labour Force Survey

Table 3  
Labour market success of Cohorts 1 and 2, one decade later

	Employment rate			Average earnings	
	All workers	Full-year full-time workers	Unemployment rate	All workers	Full-year full-time workers
		%		(1993 \$)	
Men					
Cohort 1 (1989)	89	82	6.4	35,250	38,500
Cohort 2 (1993)	84	73	10.9	32,500	37,250
Women					
Cohort 1 (1989)	72	55	7.5	20,500	26,000
Cohort 2 (1993)	70	50	10.5	18,500	24,500

Sources: Survey of Consumer Finances and Labour Force Survey

school to work should be over, it has become more difficult to find work; for those with jobs, the income earned (in 1993 dollars) is substantially less than it used to be.

The contemporary job market is particularly harsh for young men. In 1993, a high school-educated man aged 25 to 29 was considerably less likely to be employed than a man of that age in 1979. If he was employed during that year, he made 27% less than the amount earned by his counterpart in 1979; if he was employed full year full time, he earned 18% less. In fact, the labour market position of



young men working full year full time has deteriorated to such an extent that in 1993, even those with a university degree earn little more, in real terms, than high school graduates did in the late seventies.

The labour market situation of young women with secondary school education also deteriorated, but not as much as men's – perhaps because women's employment rates and average earnings were much lower to begin with. In 1993, a 25 to 29 year-old woman with a high school education was more likely to be working than her counterpart in 1979, but less likely to be employed full year full time. Furthermore, average earnings were about 12% lower for all working women as well as for those employed full time year round. □

## ■ Notes

1 LFS age, sex and educational attainment estimates, as well as unemployment rates and overall employment rates, are benchmarked to the 1991 Census of Canada population counts. SCF data on earnings and full-year full-time employment rates are benchmarked to the 1986 Census counts. (Revised SCF estimates based on the 1991 Census should be available in late 1995 or early 1996.)

Evaluations of the impact of the revisions on LFS estimates have shown that the revised rates are not significantly different from the original rates. Therefore, the main

findings in this article are unlikely to be compromised by the mixture of revised LFS and unrevised SCF rates.

2 A recent study revealed that in 1990 most persons (89%) with 11 to 13 years of schooling had high school diplomas (Gower, 1993). Thus, it seems reasonable to assume that the majority of 11 to 13 completers in earlier and later years were also graduates.

3 The change in the coding of educational attainment affected the 1989 cohort because full-year employment and earnings data for the 1989 calendar year were collected in 1990, after the introduction of the new education questions in the LFS.

4 In 1990, 13% of high school graduates had obtained a trades certificate or diploma from a vocational school or apprenticeship training program (Gower, 1993).

5 A general discussion on career blockage in the Canadian labour market can be found in an interview with David Foot, published in the Winter 1994 issue of *Perspectives* (Duchesne, 1994).

6 This employment rate increase reflects one of the longest and most important trends in the Canadian labour market, that is, the rising participation of women since World War II.

7 However, the smaller rise in the full-year full-time employment rate indicates a significant amount of part-year or part-time work.

8 In 1984, the classification system used to categorize occupations changed from the 1970 *Occupational Classification Manual* to the 1980 *Standard Occupational Classification*. In the 1980 classification, many supervisory and lower-level management occupations were reclassified; therefore, 1979 and 1993 data (that is, Cohorts 1 and 4) cannot be compared.

The increase in the proportion of blue-collar workers among young men with only a secondary school education may also reflect the inclusion of workers with explicit trade/vocational qualifications in Cohort 4. (See *Data sources and definitions*.)

9 Betcherman and Morissette (1994) found that the annual earnings of young workers aged 16 to 24 as a proportion of the annual earnings of 25 to 64 year-olds (earnings ratio) fell during the 1980s. The hourly wages ratio also declined throughout the eighties, suggesting that the drop in the earnings ratio was not simply a response to the business cycle. Attempts to assess the impact of early labour market experiences on later employment outcomes were inconclusive.

10 Persons with a university certificate below the bachelor's level are included among degree holders to maintain comparability between the cohorts throughout the study period.

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# Women in non-traditional occupations

Karen D. Hughes

For many years, women have been urged to enter non-traditional areas of employment to improve their economic prospects. During the 1970s and 1980s, Canadian women did precisely that, parlaying higher levels of education and labour force participation into a growing presence in a diverse range of male-dominated occupations (Hughes, 1990). Veterinary practice, financial management and law were just some of the occupations women entered.

By the beginning of the 1990s, the labour market – buffeted by recession and the pressures of economic globalization – was in the midst of a profound transition involving restructuring and downsizing. Although women continued to enter male-dominated occupations, they did so more slowly than before. Using 1991 Census data (see *Data source and definitions*), this article explores women's occupational crossovers from 1986 to 1991 and compares them with changes that took place between 1971 and 1986.<sup>1</sup>

## Rising labour force participation

The 1986 to 1991 period saw continued growth in women's participation in the experienced labour force. In contrast to men's stable participation rate (77.0% to 77.3%), the rate for women rose from 55.4% to 60.7%. In fact, women's participation rates in the experienced labour force increased for every age group examined (Table 1).

By 1991, 6.4 million women were in the experienced labour

## Data source and definitions

The data are from the 1971, 1986 and 1991 Censuses of Canada and refer to the population aged 15 and over. The reference period for occupation, full-year full-time employment, and employment income is the 1990 calendar year (data from the 1991 Census only were used for these characteristics).

The **experienced labour force** consists of people who were in the labour force the week preceding the census (that is, they were employed or unemployed) and, if unemployed (that is, on temporary layoff or looking for work), had worked at some time since January 1 of the year preceding the census.

**Occupations** are classified according to the *Occupational Classification Manual*, developed for the 1971 Census of Canada. If a person was employed the week before the census, that occupation was assigned; otherwise, the job of longest duration since January 1 of the preceding year was used in the analysis.

People who report at least 30 hours of work per week and who work 49 to 52 weeks a year are **full-year full-time** workers. Included are hours worked for wages, salaries, tips and commissions; hours worked in one's own business, farm or professional practice; and hours worked without pay in a family business or farm.

**Employment income** refers to total income received during 1990 as wages and salaries (including tips and commissions), net income from unincorporated non-farm businesses and/or professional practices, and net farm self-employment income.

The **median employment income** of a specific group of employment income recipients (for example, female economists) is the middle value in the ordered distribution (from low to high) of that group's individual incomes. In other words, half the workers have an income greater than the median value, while the remaining half have an income below the median.

Table 1  
Experienced labour force \*

	Women			Men		
	1971	1986	1991	1971	1986	1991
	Millions					
<b>Experienced labour force</b>	<b>3.0</b>	<b>5.5</b>	<b>6.4</b>	<b>5.7</b>	<b>7.3</b>	<b>7.9</b>
	%					
<b>Participation rate – all ages</b>	<b>39.9</b>	<b>55.4</b>	<b>60.7</b>	<b>76.4</b>	<b>77.0</b>	<b>77.3</b>
15-19	37.0	49.6	54.3	46.6	52.3	56.5
20-24	62.8	81.1	81.9	86.5	89.8	89.4
25-34	44.5	73.6	78.8	92.6	94.3	94.4
35-44	43.9	72.1	79.9	92.8	94.6	94.7
45-54	44.4	62.4	72.0	90.3	91.2	91.6
55-64	34.4	35.9	39.2	80.1	70.6	66.5
65 and over	8.3	4.2	5.6	23.6	13.7	14.4

Source: Census of Canada

\* See Data source and definitions

Karen D. Hughes is a faculty member in the Women's Studies Program at the University of Alberta. She can be reached at (403) 492-0320.

force, up almost 18% from 5.5 million in 1986. The number of men had increased just 8%, from 7.3 million to 7.9 million. Because the average annual growth rate for women (3.5%) was more than double that of men (1.6%), women's share of the experienced labour force rose from 43% in 1986 to 45% in 1991. However, for both women and men the annual rate of growth in the experienced labour force was slower from 1986 to 1991 than from 1971 to 1986.

### Higher educational attainment

The educational attainment of women in the labour force continued to rise between 1986 and 1991. By 1991, over 40% of female workers had some postsecondary education, and nearly 14% had at least some university (Chart A). As well, women were obtaining a growing share of university degrees in non-traditional areas such as commerce, law, biological sciences, agriculture, dentistry, medicine and veterinary medicine. In community colleges, women accounted for increasing proportions of diplomas granted in business, natural resources, engineering and transportation (Bellamy and Guppy, 1991; Stout, 1992).

Nonetheless, women's rising labour force participation and accreditation in male-dominated fields did not necessarily translate into employment in non-traditional occupations.

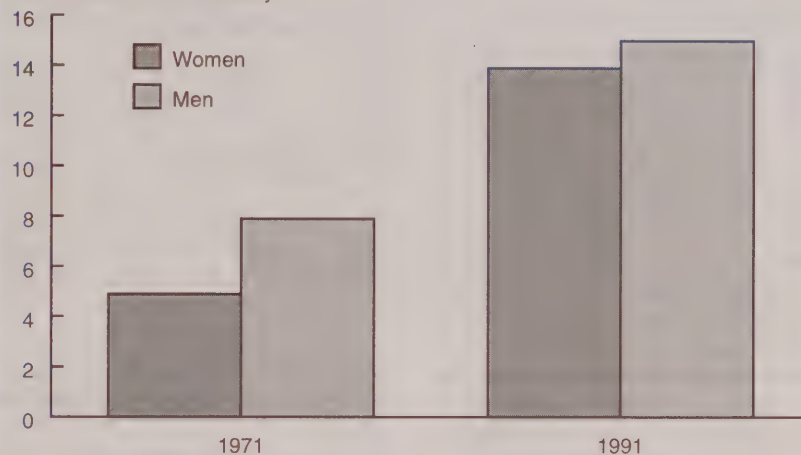
### Defining non-traditional occupations

To define non-traditional occupations and measure change within them, the proportion of women in an occupation is compared with their share of the experienced labour force. In this article, an occupation is considered non-traditional if women's representation in it during a particular year was below the proportion of women in the experienced labour force that same year (that is 34.3% in 1971, 42.8%

Chart A

**By 1991, women were almost as likely as men to have at least some university education.**

% in experienced labour force \*  
with at least some university



Source: Census of Canada

\* See Data source and definitions

in 1986, and 44.9% in 1991). For example, if women accounted for 10% of the experienced labour force in a particular occupation in 1991, it would be labelled non-traditional in 1991; conversely, an occupation with 46% female repre-

sentation would be considered traditional. Changes between 1986 and 1991 within occupations defined as non-traditional in 1971 are examined in this study.

Traditional and non-traditional occupations can be identified using

### Why use this measure?

For analyzing change in women's occupations, the coefficient of representation has two advantages. First, it was used to identify non-traditional occupations for women in 1971. Since women then made up 34.3% of the experienced labour force, it was impossible for them to be equally represented (50%) across all occupations. A cut-off of 34.3% rather than 50% was a better reflection of their situation within occupations.<sup>2</sup>

Second, and more important, from 1986 to 1991 the proportion of women in the experienced labour force rose from 42.8% to 44.9%. Given such dynamics, a simple comparison of change in the sex composition of individual occupations

confuses two distinct processes: change associated with women's rising participation in the labour force, and change associated with a pure shift into or out of an occupation. A comparison of coefficients isolates the real shift by taking into account the effect of the change in the sex composition of the experienced labour force (Noyelle, 1987).

Change in the representation of women in non-traditional occupations between 1986 and 1991 is expressed as the difference between the coefficients derived for the two years (1991 minus 1986). This is a straightforward measure of the movement toward greater (or lesser) representation of women.<sup>3</sup>



Table 2

**Distribution of occupations and experienced female labour force\***

	Coefficient of representation				
	Highly non-traditional		Intermediate		Traditional
	0.00-0.24	0.25-0.49	0.50-0.74	0.75-0.99	1.00+
	Number of occupations **				
1971	484	224	68	31	131
1986	484	162	88	49	132
1991	484	150	93	51	132
	% of experienced female labour force				
1971	100	3	6	2	86
1986	100	2	5	5	79
1991	100	2	5	5	78

Source: Census of Canada

\* See Data source and definitions

\*\* See note 5

a "coefficient of representation." (See *Why use this measure?*) If the proportion of women in an occupation in a specified year matches the proportion of women in the experienced labour force that same year, the coefficient will be exactly 1.00. A coefficient less than 1.00 shows that women are under-represented and that the occupation is non-traditional; a coefficient above 1.00 indicates the reverse. In the examples cited above, the occupation that is 10% female would have a coefficient of 0.22 (10 divided by 44.9), denoting a non-traditional status, while the occupation that is 46% female would show a coefficient of 1.02 (46 divided by 44.9), a value in the traditional sphere.

The range of the coefficient of representation for non-traditional occupations is wide: from 0.00 to 0.99. However, because occupations with coefficients approaching 0.99 have a sex composition closely reflecting that of the experienced labour force, they should not be considered "non-traditional" in the usual sense. Since this article examines uncommon career choices for women, occupations with a coefficient less than 0.50 have been defined as "highly

non-traditional," while occupations with coefficients from 0.50 to 0.99 are labelled "intermediate."<sup>4</sup>

### Slower movement into non-traditional occupations

On an annual basis, the coefficients of representation for each of the 484 detailed occupations examined<sup>5</sup> show far less change between 1986 and 1991 than between 1971 and 1986 (Table 2). From 1971 to 1986, the number of highly non-traditional occupations for women dropped from 292 to 250 (an average decline of 2.8 per year). By 1991, the number had fallen by only 7 more (1.4 per year), to 243. While women's presence in many

Table 3

**Highly non-traditional occupations\* with greatest shifts in female representation\*\***

	Coefficient of representation		
	1986	1991	Difference
Optometrists	0.76	0.99	0.23
Services management occupations	0.63	0.85	0.22
Financial management occupations	0.75	0.96	0.22
Osteopaths and chiropractors	0.38	0.57	0.19
Farm management occupations	0.43	0.61	0.18
Farmers	0.22	0.40	0.18
Purchasing management occupations	0.41	0.59	0.18
Inspectors and regulatory officers, non-government	0.44	0.61	0.17
Members of legislative bodies	0.60	0.77	0.16
Government administrators	0.66	0.81	0.15
Architects	0.25	0.39	0.14
Insurance salesmen and agents ***	0.86	1.01	0.14
Lawyers and notaries	0.51	0.65	0.14
Supervisors in other occupations in architecture and engineering †	0.22	0.36	0.14
Dispensing opticians	1.12	1.25	0.13
Newsboys ††	0.39	0.52	0.13
Commercial travellers	0.37	0.50	0.12
Economists	0.65	0.77	0.12
Management occupations in natural sciences and engineering	0.20	0.32	0.12
Purchasing officers and buyers (except wholesale and retail trade)	0.70	0.82	0.12
Inspectors and regulatory officers, government	0.48	0.60	0.12
Supervisors in sales occupations, services †††	0.68	0.80	0.12

Source: Census of Canada

\* Coefficient of representation less than 0.50 in 1971; excludes occupations with fewer than 1,000 females in the experienced labour force in 1991 and all occupations "not elsewhere classified"

\*\* Occupations are ranked by size of difference

\*\*\* Renamed "Insurance sales occupations" in the more recent 1980 Standard Occupational Classification (SOC)

† Occupations concerned with surveying, draughting and engineering technology

†† Renamed "Newspaper carriers and vendors" in the 1980 SOC

††† Includes insurance, securities, real estate, advertising and other services



other highly non-traditional fields increased, it was not enough to push these occupations into the intermediate or traditional categories. In fact, the number of traditional occupations remained static over the two decades studied.

The proportion of women in traditionally female occupations fell from 86% in 1971 to 79% in 1986. This percentage had improved only marginally by 1991 with over three-quarters of female workers (78%) still concentrated in over one-quarter (132 out of 484) of all occupations.

### Occupations with greatest influx of women

Despite the slow pace of change, between 1986 and 1991 women's presence increased in a number of non-traditional occupations. To identify those highly non-traditional occupations that experienced the greatest influx of women, differences between the 1986 and 1991 coefficients of representation were ranked – the larger the difference, the greater the change.<sup>6</sup> Ten of twenty-two occupations singled out were in management and administration, seven were in professional categories, and four were in sales (Table 3).<sup>7</sup> The greatest increases in female representation over the five-year period were found among optometrists, occupations related to services management and financial management, and osteopaths and chiropractors.

Seven occupations graduated from the highly non-traditional to the intermediate category: osteopaths and chiropractors, farm management, purchasing management, non-government inspectors and regulatory officers, "newsboys,"<sup>8</sup> commercial travellers, and government inspectors and regulatory officers. Only one occupation (insurance "salesmen" and agents<sup>9</sup>) moved into the traditional category (dispensing opticians having already become traditional during

the 1971 to 1986 period). Four occupations – management in the natural sciences and engineering, supervision in architecture and engineering, architects, and farmers – remained highly non-traditional, with coefficients below 0.50.

### Are these women different?

Women entering non-traditional fields are often assumed to be younger and better educated than the average female worker. However, the diversity of the 22 highly non-traditional occupations with the greatest influx of women suggests that the characteristics of such women are varied. In fact, women in the highly non-traditional occupations tended to be slightly older, and while they were more likely than the average female worker to have a university degree, the difference in the proportions with a postsecondary diploma was minor.

On the other hand, women in the fastest changing highly non-traditional occupations tended to be

much younger than their male counterparts (Chart B). Forty-one percent of these women were under 35 compared with only 27% of the men. Some educational differences were also evident. Although a smaller share of women than men had a university degree (22% versus 26%), women were more likely to have a postsecondary diploma (39% versus 31%).

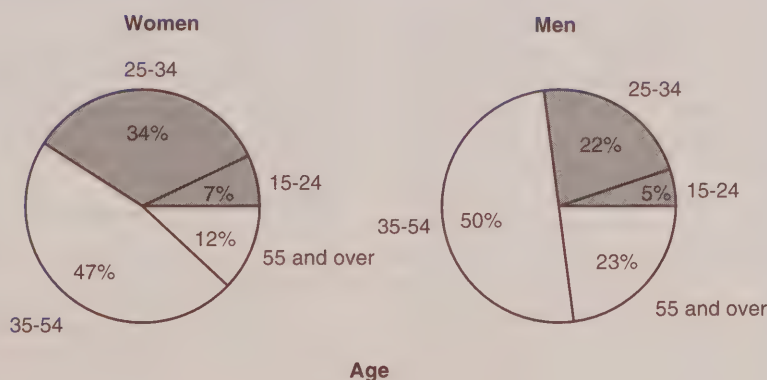
### They work more hours ...

With only two exceptions (newsboys, and osteopaths and chiropractors), full-year full-time employment was more common among women in the fastest changing highly non-traditional occupations than among female workers generally. Over two-thirds of women in these occupations worked full year full time, compared with less than half of all female workers.

However, women were less likely than their male counterparts to work full year full time. Differ-

Chart B

**Women in the fastest changing highly non-traditional occupations in 1991 tended to be younger than their male counterparts.**



Source: Census of Canada

ences were most pronounced for osteopaths and chiropractors (with 43% of women working a full schedule compared with 68% of men), farm management occupations (54% and 71%, respectively), dispensing opticians (57% and 73%), and commercial travellers (61% and 77%). Nevertheless, differences were minor in some occupations. For example, 74% of women and 75% of men employed as insurance salesmen and agents worked full year full time, as did 19% of women and 20% of men employed as newsboys.

### ... and have greater employment income

There is a widespread belief that women in non-traditional occupations have better economic prospects than most working women. Indeed, 18 of the 22 fastest-changing highly non-traditional occupations (Table 4) generated full-year full-time median employment incomes above those of female workers overall (ranging from \$25,500 for osteopaths and chiropractors to \$41,700 for lawyers and notaries). The median figure for all highly non-traditional occupations was \$29,600, compared with \$24,500 for all women working a full schedule.

However, many women have only recently entered non-traditional occupations, and thus have less work experience and seniority than many of the men in these occupations; as a result, one would expect women to have somewhat lower median incomes, although there could be other reasons for such differences as well (Coish and Hale, 1995).<sup>10</sup> In fact, the data show that the median incomes of women working full year full time were consistently below those of their male counterparts. The median income ratio (women's income as a proportion of men's) was lowest (44%) for optometrists, and osteopaths and chiropractors,<sup>11</sup> and highest (88%) for government

inspectors and regulatory officers. However, the overall income ratio for women in the 22 highly non-traditional fields studied was 80%, well above that for female workers in all occupations combined (70%).

### Summary

The presence of women in non-traditional occupations continued to increase in the late 1980s, although the pace of change slowed considerably from that of the previous 15

years. The occupations with the greatest influx of women between 1986 and 1991 were in management and administration, professional categories and sales. Women in the fastest changing highly non-traditional occupations tended to be older, better educated, and better remunerated than other female workers. Yet, when compared with their male counterparts, they tended to be younger, less likely to have a university degree, and less well paid. Nonetheless, the gap

Table 4  
Median employment income of full-year full-time female workers in highly non-traditional occupations,\* 1990 \*\*

	Median employment income	
	\$	As % of male median
<b>All occupations</b>	<b>24,500</b>	<b>70</b>
<b>Highly non-traditional occupations with greatest shifts in female representation</b>	<b>29,600</b>	<b>80</b>
Lawyers and notaries	41,700	63
Management occupations in natural sciences and engineering	40,000	65
Government administrators	38,200	75
Economists	37,300	75
Inspectors and regulatory officers, government	35,800	88
Members of legislative bodies	34,500	75
Financial management occupations	33,900	65
Architects	32,700	73
Supervisors in other occupations in architecture and engineering ***	32,400	73
Optometrists	30,700	44
Purchasing officers and buyers (except wholesale and retail trade)	30,600	79
Commercial travellers	30,300	79
Supervisors in sales occupations, services †	30,200	68
Purchasing management occupations	29,700	74
Inspectors and regulatory officers, non-government	28,900	73
Services management occupations	26,300	65
Insurance salesmen and agents ††	25,600	70
Osteopaths and chiropractors	25,500	44
Dispensing opticians	21,700	68
Newsboys †††	15,100	63
Farm management occupations	13,000	66
Farmers	8,800	69

Source: Census of Canada

\* Coefficient of representation less than 0.50 in 1971; excludes occupations with fewer than 1,000 females in the experienced labour force in 1991 and all occupations "not elsewhere classified"

\*\* Includes only those full-year full-time workers who were in the experienced labour force at the time of the 1991 Census; occupations are ranked by size of median income

\*\*\* Occupations concerned with surveying, draughting and engineering technology

† Includes insurance, securities, real estate, advertising and other services

†† Renamed "Insurance sales occupations" in the 1980 SOC

††† Renamed "Newspaper carriers and vendors" in the 1980 SOC



between women's and men's median incomes in all highly non-traditional fields combined was narrower than that between female and male workers overall, suggesting that such occupations remain an important avenue for women wishing to improve their economic prospects. □

## ■ Notes

1 Occupations are based on the 1971 *Occupational Classification Manual* (OCM).

2 An alternative approach is to label an occupation "non-traditional" if one sex accounts for less than 50% of the workers in that occupation (Boulet and Lavallée, 1984). This cut-off is fixed regardless of the percentage distribution of the sexes within the labour force as a whole.

3 Despite its advantages over other statistical measures, the difference does not perfectly capture the change occurring in such dynamic situations (Blackburn and Marsh, 1991).

4 For a listing of all occupations found in the highly non-traditional, intermediate and traditional categories, as well as their respective coefficients of representation, contact Jeannine Usalcas at (613) 951-6889, or fax (613) 951-4179.

5 There are 486 detailed occupations in the 1971 OCM. In this analysis, 4 of these occupations have been collapsed into 2, yielding a total of 484 occupations.

6 The ranking excludes occupations with fewer than 1,000 women in the experienced labour force in 1991, as well as miscellaneous occupations "not elsewhere classified."

7 Although the study was originally intended to focus on the top 20 fastest changing occupations, the same amount of change was observed among several occupations at the cut-off point.

8 This occupation was renamed "newspaper carriers and vendors" in the more recent 1980 *Standard Occupational Classification* (SOC), Catalogue 12-565E.

9 This occupation was renamed "insurance sales occupations" in the more recent 1980 SOC.

10 It is not possible with census data to control for factors that are crucial determinants of employment income, such as specific educational credentials and work experience.

11 Between 1986 and 1991, the number of female optometrists in the experienced labour force increased 82% (from 810 to 1,475), while the number of female osteopaths and chiropractors more than doubled (from 470 to 1,035). The substantial influx of new entrants into these occupations would have exerted a considerable downward pressure on median employment incomes.

Although this may be a plausible explanation for the large wage gap, it does not hold in all cases. For instance, the increase in the number of female architects was greater than that of female optometrists (from 810 to 1,900) but the median employment income ratio was 73%.

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# Labour market outcomes for university co-op graduates

Jamie Darch

The days when a university degree almost guaranteed employment are long gone. Steady enrolment growth has produced an increasing number of university graduates. Consequently, employers seeking highly educated workers can select from a large and expanding recruitment pool. In the face of this heightened competition, it is widely believed that work experience often means the difference between finding a job or continuing the search.

So what are students doing to improve their employment prospects? One option is co-operative education, that is, combining academic courses with work terms during which on-the-job experience is gained in a particular field of study (see *Co-operative programs at Canadian universities*). This article attempts to determine whether graduation from a co-op program is an advantage for university graduates when they enter the job market, by looking at three measures of labour market performance: full-time employment, earnings, and match between job and field of study.

Data on employment outcomes from the 1992 Survey of 1990 Graduates (S90G) (see *Data source and definitions*) are used to compare graduates of university co-op programs at the bachelor's level with their non co-op counterparts. The analysis is limited to the three fields of study that together accounted for 8 out of 10 co-op graduates in 1990: engineering; mathematics and physical sciences; and commerce and economics.

Jamie Darch is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-0177.

## Co-operative programs at Canadian universities

The Canadian Centre for Co-operative Education (formerly the Canadian Association for Co-operative Education) defines co-operative education as an academic plan that formally integrates classroom studies with work experience in appropriate fields of business, industry, government, social services, and the professions. Co-operative education began in Canada in 1957 when the University of Waterloo enrolled 75 students in its engineering co-op program. By 1978-79, 11 universities were offering a co-op education, with enrolment exceeding 10,000; by 1993-94, the number of universities with such programs had more than tripled to 39, with enrolment approaching 31,000. Co-op programs are now available in most disciplines and must meet several criteria:

- The educational institution develops and/or approves each work situation.
- Students work rather than merely observe.
- Students receive remuneration for work performed.
- The educational institution monitors students' progress on the job.
- The employer supervises and evaluates students' performance on the job.

## The Class of 1990

According to the S90G, over 95,000 students earned bachelor's degrees in 1990. Of these graduates, 4.4% (about 4,200) had taken co-op programs.

The largest share of co-op graduates (36%) earned their degrees in engineering. Mathematics (including computer science) and physical sciences accounted for

- Total co-operative work experience is usually 50% of the time spent in academic study, and never less than 30%.

## Why students choose co-op programs

A co-op degree takes longer to complete, is more expensive to obtain because of supplemental fees, and often entails additional costs, such as travel and accommodation, during work terms. Nevertheless, enrolment in co-op programs is growing in popularity, as a rising number of educational institutions offer this option in an increasing variety of study areas. Many students enrol in a co-op program to gain work experience and to develop a network of contacts, both of which help improve employment prospects after graduation. Co-op programs also help ease the transition from school to the workplace (Ryan, 1992). And some students may need work terms to help finance their studies (AUCC, 1990).<sup>1</sup>

Co-op programs also benefit employers (Shaw, 1988). They receive the relatively inexpensive services of students, who may be replacing regular workers on holiday or other temporary leave; they can also assess potential employees, and possibly reduce recruitment costs in the future.

another 29%, and commerce and economics, 20%. The remaining 15% graduated from a variety of other fields.<sup>2</sup>

Both co-op and non co-op programs in the three fields examined were male-dominated. In 1990, men accounted for 86% of co-op graduates in engineering, 73% of those in mathematics and physical sciences, and 57% of those in com-

## Data source and definitions

### Survey of 1990 Graduates

The data are from Statistics Canada's Survey of 1990 Graduates (S90G), conducted in June 1992. The S90G used a representative sample of people who had graduated from universities, community colleges and trade schools in 1990. Questions focused on their employment history in the two years since they had earned degrees or diplomas. This article examines employment outcomes for university graduates with bachelor's degrees only (persons who obtained graduate degrees in 1990 or specialized certificates and diplomas from universities are excluded, as are graduates from colleges and trade schools).

Although this study focuses on co-op graduates, the S90G was not specifically designed to gather data related to these programs. Consequently, a very small sample size restricted the scope of this analysis and required some modification of statistical techniques (see *Statistical techniques for modelling*).

### Definitions

Graduates who reported that they usually worked 30 or more hours a week at the time of the survey were considered to be employed **full time**.

The **full-time employment rate** is the number of graduates from a particular field of study working full time expressed as a percentage of all graduates in that field. For example, the full-time employment rate of 1990 co-op engineering graduates is the percentage of these graduates employed full time in June 1992.

**Previous work experience** is measured in terms of the total number of months of full-time employment, both within and outside co-op programs, accumulated before university graduation. All full-time work experience is included, regardless of the nature of the work performed (for example,

summers spent working full time in fast-food outlets when a graduate was a high school student).

**Relationship of job to field of study** is based on the graduates' perception. Those who described their job as directly or partially related to their studies were considered to have a "related" job.

Respondents who were working in June 1992 were asked to estimate what their 1992 **earnings** would be if they worked at that job all year at the June 1992 rate of pay. This article considers the earnings of full-time workers only. A small number of responses fell into the high range – over \$100,000. These "outliers" were excluded in the earnings model.

The three **fields of study** examined in this article correspond to the categories used in the University Student Information System developed by the Education, Culture and Tourism Division of Statistics Canada. These categories were modified to include only those disciplines that the S90G identified as having co-op graduates:

**Engineering:** includes architecture, chemical engineering, civil engineering, design/systems engineering, electrical engineering, industrial engineering, mining engineering, mechanical engineering, metallurgical engineering, other engineering, engineering science, and engineering (general).

**Mathematics and physical sciences:** includes computer science, mathematics, chemistry, and physics (excluding astronomy and aerospace sciences).

**Commerce and economics:** includes commerce, management, business administration, administrative studies/sciences, and economics.

For further information on the Survey of 1990 Graduates, contact Mike Sivyer, Special Surveys Division at (613) 951-4598, or fax (613) 951-0562.

merce and economics – virtually the same proportions as among non co-op graduates.

### Graduating into a declining job market

Finding work was particularly challenging for the Class of 1990.<sup>3</sup> Their entry into the labour market coincided with the start of a recession – a period when employers were more likely to reduce their workforce than to recruit. Given this economic climate and the level of competition for a diminishing number of jobs, was a co-op education an advantage?

The three measures of performance examined in this study – full-time employment, earnings, and match with field of study – are associated with many factors besides graduation from a co-op program, such as age, sex, previous work experience, and geographic region. To determine whether a co-op degree provided some advantage, these other factors were held constant through a multivariate model developed for each measure of job market performance. (See *Statistical techniques for modelling*.)

### Working full time?

A simple descriptive analysis of the data showed that co-op graduates from the three fields of study were more likely than their non co-op counterparts to be working full time in June 1992. More complex analysis using a multivariate model, however, revealed that the possession of a co-op degree significantly increased the likelihood of full-time employment for graduates in mathematics and physical sciences only. According to the model estimates, graduates of co-op programs in this field were 12% more likely to have full-time jobs in 1992 than were their non co-op counterparts. The effect of a co-op



## Statistical techniques for modelling

The three measures of labour market performance – annual earnings, full-time employment and working in a job related to one's field of study – rarely depend on one factor alone, although a single factor can have a significant effect. To isolate the effect of one factor or "independent" variable (for example, graduation from a co-op program) on one or more "dependent" variables (earnings, full-time employment, related job), the effects of other independent variables must be "controlled." This involves holding the value of those variables constant by statistically adjusting the data to nullify differences in the estimated effects of each variable in the model (except graduation from a co-op program). Similarly, the impact of each of the other independent variables is determined while controlling for the effects of all other independent variables.

As the S90G was not specifically designed to capture information on co-op graduates, a sub-grouping of available independent variables was selected to test for a relationship with each of the three dependent variables. In addition to graduation from a co-op program, the variables tested were full-time work experience, job satisfaction, satisfaction with pay, usual weekly hours of work, whether the graduate would select the same program of study again, age at graduation, province of residence at the time of the survey, and sex. These potential independent variables were screened to determine whether they significantly correlated with any of the dependent variables. Those showing a significant correlation were used in the final models. Interaction between independent variables was checked to confirm their independence (that is, to be sure that one was not working through another).

The validity of these techniques depends on the models containing all of the important independent variables. In practice, the variables available from the S90G limited the analysis. The small number of sampled students graduating from co-op programs relative to non co-op programs was another constraint. (The

modelling process was limited to bachelor's degree graduates since they account for the vast majority (93%) of graduates from co-op programs.) All models were run separately by field of study using the statistical software SUDAAN (Survey Data Analysis Software, Release 6.34, Research Triangle Institute, Research Triangle Park, NC 27709), which can accommodate the stratified sampling design of the survey. A significance level of .05 was used to determine whether an effect was significant (that is, P-value < .05).

### Earnings

Multiple linear regression was used to assess the impact of graduating from a co-op program on graduates' annual earnings (the dependent variable), independent of any other effect. This modelling technique is appropriate when there is evidence of a linear relationship between a continuous dependent variable and at least one other continuous independent variable. After the independent variables found to have no significant impact on annual earnings were screened out, the model was adjusted for each of the three fields of study. In addition to graduation from a co-op program, only previous work experience and usual hours worked per week were retained. Table 1 shows regression results from the earnings model for the three fields examined.

Table 1  
Results from earnings model

	Beta coefficient	P-value
<b>Mathematics and physical sciences</b>		
Co-op program	5.49	0.00*
Previous work experience	0.08	0.00*
Usual hours worked per week	0.30	0.00*
<b>Engineering</b>		
Co-op program	0.91	0.16
Previous work experience	0.06	0.00*
Usual hours worked per week	0.19	0.00*
<b>Commerce and economics</b>		
Co-op program	3.70	0.02*
Previous work experience	0.12	0.00*
Usual hours worked per week	0.50	0.00*

\* Statistically significant at the .05 level

### Full-time employment and relationship to field of study

Logistic regression analysis was used to assess the impact of graduating from a co-op program on the probabilities of getting a full-time job, and of getting a job related to the field of study – independent of the influences of other factors.

Table 2  
P-values from full-time employment model

	Mathematics and physical sciences	Engineering	Commerce and economics
Co-op program	0.01*	0.91	0.36
Previous work experience	0.06	0.36	0.68
Sex	0.21	0.39	0.13

\* Statistically significant at the .05 level

After an initial statistical screening of potential independent variables, only previous work experience and sex were retained (in addition to participation in a co-op program) for both the full-time employment model (Table 2) and the job-related-to-studies model (Table 3).

Table 3  
P-values from job-related-to-studies model

	Mathematics and physical sciences	Engineering	Commerce and economics
Co-op program	0.09	0.35	0.24
Previous work experience	0.23	0.45	0.29
Sex	0.17	0.60	0.92



education in engineering or in commerce and economics was not statistically significant – differences in employment rates for graduates of these fields were attributable to other factors.

### Earnings – experience is the key

Among full-time workers in 1992, co-op graduates' average earnings differed from those of non co-op graduates in the three major fields of study. A multivariate model showed that a co-op education had a significant effect on earnings for mathematics and physical science graduates, as well as degree holders in commerce and economics: an estimated \$5,490 and \$3,700 advantage in average expected annual earnings, respectively.<sup>4</sup> By contrast, participation in a co-op program made little difference to the average earnings of graduates in engineering.

According to the model, the crucial factor in graduates' earnings was work experience, whether or not it was gained in a co-op program. On average, university co-op programs provided graduates with two years' work experience. The earnings model showed that each month of experience yielded an estimated \$90 in additional annual earnings. Non co-op graduates with work experience equivalent to that obtained in a co-op program enjoyed a similar earnings advantage.<sup>5</sup>

### A good match?

Relatively high proportions of both co-op and non co-op graduates in the three fields who were working full time two years after graduation were employed in jobs related to their studies: 93% of graduates in engineering, 85% of those in mathematics and physical sciences, and 83% of those in commerce and economics. Indeed, the multivariate model showed that the likelihood of having a job in one's field was as good for non co-op as for co-op graduates.

## Summary

The Class of 1990 faced a particularly tough labour market. Their job search coincided with the beginning of a recession during which employment prospects for all workers declined. For a small percentage of these graduates a co-op education provided employment during their academic studies and relevant work experience that might otherwise have been much more difficult to obtain.

A co-op education was a significant advantage in terms of increased earnings for graduates in mathematics (including computer science) and physical sciences, as well as those in commerce and economics. In addition, a co-op education in mathematics and physical sciences was more likely to result in full-time employment.

The possession of a co-op degree in engineering, however, did not significantly affect the subsequent labour market performance of these graduates. This result is perhaps not surprising since the labour market demand for engineering graduates tends to be high relative to the demand for degree holders with other specializations (Clark, 1991).

Data used in this study were gathered two years after graduation. Efforts to measure performance during the first few years of labour market participation may not reveal the true value of co-op programs, especially in professional occupations. Results five or more years after graduation would provide a better reflection of their effect on graduates' careers.

The author wishes to thank Pierre St-Martin from the Business Survey Methods Division for his valuable assistance with methodology.

## Notes

1 Although some students may choose to obtain their bachelor's degree through a co-op program for economic reasons, 69% of all 1990 co-op graduates reported taking a loan to help finance their studies, compared with 61% of non co-op graduates. The average amounts borrowed were \$11,400 and \$12,100, respectively.

2 Most of the remaining co-op graduates had obtained degrees in the social sciences; education, physical education, sports, recreation and leisure; agriculture; or, fine and applied arts.

3 Although some graduates would have pursued further studies, most would have entered the job market at this time.

4 Observations used to calculate the mean were the same as those used in the earnings model. Outliers identified by the modelling process and all persons earning more than \$100,000 were excluded.

5 Co-op graduates in two of the three fields examined actually had less work experience upon graduation than non co-op graduates. Co-op graduates in mathematics and physical sciences reported, on average, 2.1 years of work experience, compared with 2.4 for their non co-op counterparts. An even greater discrepancy was found between co-op and non co-op graduates in commerce and economics, who reported an average of 1.5 and 3.3 years of experience, respectively. However, in engineering, co-op graduates had more years of work experience (2.4) than their non co-op counterparts (2.1).

This apparent anomaly – co-op graduates reporting less work experience than non co-op graduates – may reflect the younger age structure of the former. When they completed their programs, the average age of co-op graduates was 24, versus 26 for non co-op graduates. The age gap suggests that they were less likely than non co-op graduates to have interrupted or carried out their studies with periods of labour market participation. Indeed, the data show that co-op graduates were less likely than their non co-op counterparts to have obtained their degrees on a part-time or combination full-time/part-time basis. Only 5% of co-op graduates in mathematics and physical sciences and 5% of those in commerce and economics earned their degrees on a non full-time basis. The corresponding proportions were much greater for non co-op graduates in mathematics and physical sciences (22%) and in commerce and economics (23%). In engineering, the proportions were small for both co-op and non co-op graduates (7% and 9%, respectively).

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## Perspectives on Labour and Income

*The quarterly for labour market and income information*



# Full-year employment across the country

Susan Crompton

Are traditional work patterns breaking down? Certainly, "steady work," that is, full-time year-round employment, seems increasingly harder to find, while part-time work, temporary employment and irregular or casual work schedules have increased.<sup>1</sup> But has the economy really lost its capacity to generate enough steady employment to keep up with the growth in the working-age population?

The brief answer is ... maybe. Although the number of persons working full time and those working full year full time grew more rapidly than the working-age population during the 1983-89 economic expansion (see *Data source and definitions*), these gains were largely eliminated by the subsequent 1990-92 recession.

This article briefly examines full-time and full-year full-time employment rates in each province, from 1983 to 1993. Because the period encompasses a complete business cycle, the discussion is divided into two segments: recovery and expansion (1983 to 1989), and recession and initial recovery (1990 to 1993).

## Full-time does not necessarily mean full-year

The proportion of the working-age population employed full time at any point in a calendar year will always be higher than the proportion employed full time throughout that year. There are several reasons for this. First, some persons are employed full time on a temporary basis; for example, people working

## Data source and definitions

Data were taken from "Key labour and income facts," a selection of labour and income indicators published regularly in *Perspectives* (see pages 44-47 in this issue). This study is based on the 10-year time series available on diskette. Data on full-time employment are collected by the monthly Labour Force Survey (LFS); as such, they constitute a snapshot of employment in a selected mid-month reference week. The annual estimates are averages of the 12 monthly snapshots. Data on full-year full-time employment are collected by the Survey of Consumer Finances (SCF), conducted each year in April as a supplement to the LFS. Respondents to this survey are asked to recall the number of weeks they were employed in the previous calendar year.<sup>2</sup>

Full-time and full-year full-time employment rates provide complementary information about labour market conditions. Because they are based on the LFS, full-time rates offer almost immediate information about monthly employment conditions. Full-year rates, based on the SCF, provide data that are less timely and less frequent; however, they reveal annual employment conditions that "flesh out" the monthly LFS snapshots. For example, the timing of the labour market effects of the 1990-92 recession varies for these two rates. Although both full-year and full-time employment rates began to fall in 1990 with the onset of the recession, and continued to fall each year thereafter, the greatest drop in the full-year rate occurred between 1989 and 1990 (going from 44.6% to 42.8%), while the drop in the full-time rate was steepest one year later (from 52.1% in 1990 to 49.7% in 1991).<sup>3</sup> This pattern arises because full-year workers losing their jobs in 1990 exerted an immediate downward pressure on the full-year rate because they had not completed 49 to 52 weeks of employment; full-

time rates were slower to fall because these workers had been employed full time for part of that year.

**Employment:** Employment measures the number of people employed, not the number of jobs held. Because a small proportion of workers were multiple jobholders (only 5% in 1993), and these second jobs accounted for a small proportion of all jobs held, this article deals with the number of persons employed.

**Full-time:** Persons who were employed in the LFS reference week and who usually worked 30 or more hours per week were working full time. If a person held more than one job, all hours were counted in order to determine full-time status.

**Full-year full-time (abbreviated to full-year):** A full-year full-time worker was one who worked mostly 30 hours or more per week for 49 to 52 weeks in the calendar year preceding the SCF.

**Working-age population:** This refers to the Canadian population aged 15 years and over when the LFS was carried out (excluding members of the Armed Forces, residents of institutions, and persons living on Indian reserves or in the Yukon and Northwest Territories).

**Full-time employment rate:** This measure is calculated by dividing the annual average level of full-time employment by the annual average working-age population.

**Full-year full-time employment rate:** This rate represents the percentage of the working-age population (when the LFS was carried out) that was employed full year full time throughout the previous calendar year. Some workers may not have held the same job for the entire year, although they would have been continuously employed.

*Susan Crompton is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-0178.*



on contract or for temporary help agencies. Second, full-time employment may be temporarily or permanently reduced to part-time work (during a materials shortage or when downsizing, for instance). Third, most people beginning or leaving a full-time "permanent" job do so during the calendar year – not on January 1 or December 31; such workers are considered part-year workers for the calendar year in which they begin or end their employment.

Although movement into and out of the labour market occurs on an ongoing basis (for example, recent graduates looking for work, older workers retiring, women returning to work after maternity leave) and affects employment rates, the business cycle has a more profound impact. Temporary layoffs, job losses and bankruptcies account for a significant proportion of part-year workers in a recession, and hiring accounts for the majority of the increase in such workers during an expansionary period.<sup>4</sup>

In any given province, the difference between the proportion of the working-age population employed full time (both part and full year) and the proportion employed full time throughout the year reflects the extent to which employers provide steady employment. The degree of steady employment, in turn, depends on a number of factors. In addition to general economic conditions, one of the most important factors is the industry mix in that province. For example, provinces with a relatively high share of seasonal industrial activity tend to have a smaller proportion of their workforce employed full year. In contrast, provinces with a wider mix of industries where seasonality has less impact probably register a higher proportion of full-year employment.

The difference between full-time and full-year employment rates is consistent for all industries

combined, however, regardless of prevailing economic conditions (Chart A). From 1983 to 1993, the rates were separated by a fairly constant 8 to 10 percentage point gap at the Canada level; in each of the provinces, the size of the gap was also stable (Appendix).

### Recovery and expansion, 1983 to 1989

#### Atlantic Canada

The Atlantic provinces are almost a textbook example of the impact of industry mix on employment, showing how a heavy reliance on seasonal industries can weaken steady employment opportunities, while a more balanced industry mix can improve them.

During the expansion, Newfoundland had the lowest full-time employment rates in Canada. On average, only 38% of the province's working-age population was employed full time between 1983 and 1987, although a brief rally in

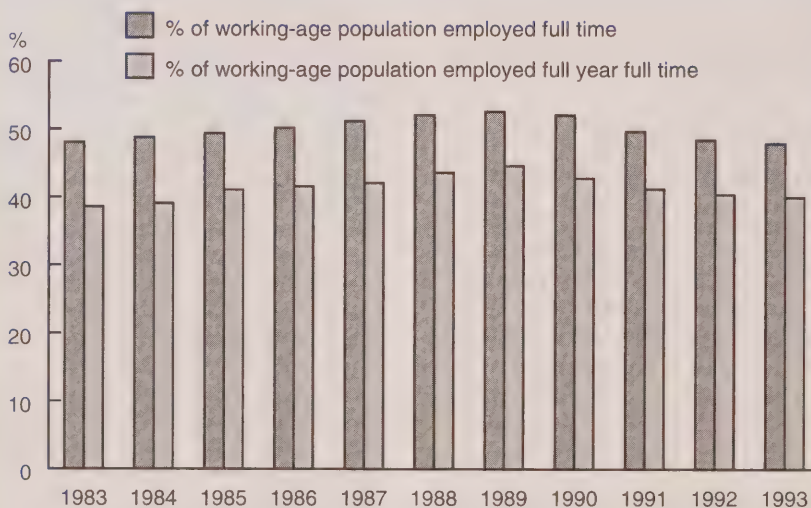
the late 1980s pushed the rate over 40%. The same is true for full-year rates: throughout the expansion between 25% and 29% of the adult population worked full time year round (Appendix).

Nevertheless, employment growth in Newfoundland was able to keep pace with the national average. Between 1983 and 1989, the number of Newfoundlanders working full time grew by 15%, while the increase in full-year employment was even greater (Chart B).

In contrast, Prince Edward Island's full-time employment rates were the highest in the region, reaching 48% in 1988. Clearly, many of these full-time workers were employed in seasonal industries, since rates for full-year employment ran between 29% and 34% during the expansion. The province did, however, generate 12% more full-time and 27% more full-year employment during this period.

Chart A

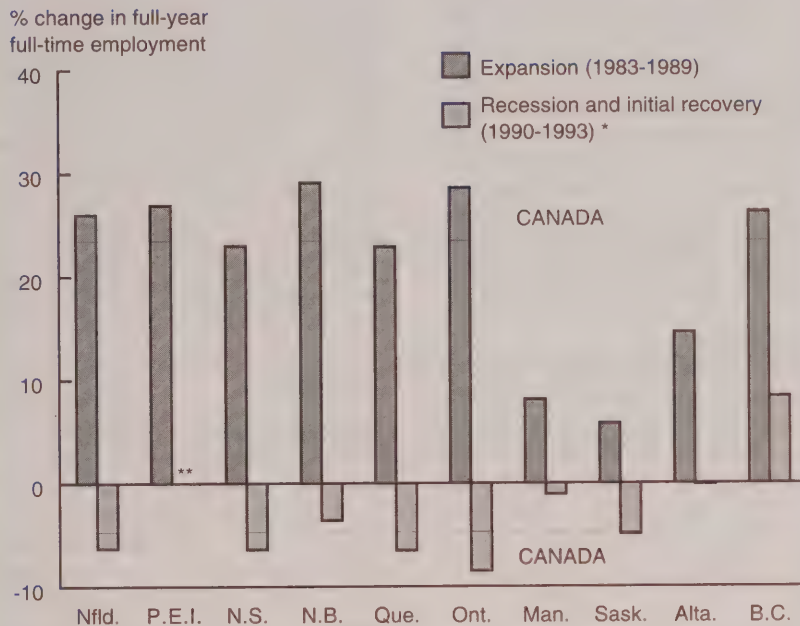
**The gap between full-time and full-year employment rates is quite consistent.**



Source: Key labour and income facts in Perspectives on Labour and Income

Chart B

**British Columbia fared the best throughout the business cycle in terms of growth in full-year employment.**



Source: Key labour and income facts in Perspectives on Labour and Income

\* Percentage change using 1989 as the base year

\*\* 1989-1993 percentage change equals zero

Nova Scotia's relatively diverse industry mix helped to support a higher rate of "steady work" in the province. It had the region's best full-year full-time employment rates during the 1980s, ranging from 32% to 37%; nevertheless, these rates were still six to eight percentage points below the national average. However, employment growth did match national averages: 16% more Nova Scotians worked full time in 1989 than in 1983, and 23% more worked full year.

In New Brunswick, full-time employment rates increased steadily as the expansion continued. Full-year rates rose more than six percentage points over the period: by 1989, 36% of working-age residents had full-time work year round. This province's great strides

in both full-time and full-year employment growth were not only the best in the region (at 17% and 29%, respectively, between 1983 and 1989), but among the best nationally.

### Central Canada

Central Canada accounts for almost two-thirds of the country's workforce. But there are considerable differences between the labour markets of Quebec and Ontario.

In 1983, 46% of Quebec's working-age population was employed full time; by 1989, steady improvements had pushed the rate to 50%. The full-year employment rate also increased, to 42%. However, these rates were no match for those in Ontario, where the full-time rate reached a high of 56% in 1988 and

1989, and full-year employment rates, averaging 46%, were the country's best throughout most of the expansionary period.

Ontario's enviable job-creation performance – the second best in the country in terms of both full-time and full-year employment growth – enabled the province to employ an increasing proportion of its rapidly expanding working-age population. Specifically, the province generated employment for 22% more full-time and 29% more full-year workers between 1983 and 1989, which more than compensated for its 10% working-age population growth.<sup>5</sup> In contrast, Quebec's record on employment growth was similar to that of the Atlantic provinces: full-time employment grew by 15% and full-year by 23%.

### Western Canada

Compared with the widely varying employment conditions observed in Central and Atlantic Canada, the full-time employment rates of Manitoba and Saskatchewan were almost identical throughout the period (49% to 51%). Their full-year rates fluctuated around 42% and 41%, respectively. These provinces registered the lowest employment growth in the country (both full-time and full-year). The prominence of agriculture, an industry characterized by high self-employment, in combination with slow population growth, may have contributed to their consistently low growth.

If Manitoba and Saskatchewan are twins, Alberta and British Columbia are competitive cousins. Throughout the expansion, Alberta provided 54% to 57% of its working-age population with full-time employment (the highest rates in the country); British Columbia recorded rates six to ten percentage points lower. Alberta also excelled in full-year employment, ending the expansion with a full-year employment rate of 47%, compared



with 43% in British Columbia. Nevertheless, the latter province experienced more robust employment growth. Between 1983 and 1989, British Columbia created jobs for 24% more full-time – the best performance nationally – and 26% more full-year workers; in contrast, Alberta's full-time and full-year employment gains were only 9% and 15%, respectively.<sup>6</sup>

Perhaps British Columbia's more remarkable achievement, though, was its steady accumulation of employment gains from 1984 onwards, creating a momentum that was to insulate the province in the 1990-92 recession. In stark contrast, the other provinces suffered substantial setbacks in the early 1990s.

## Recession and initial recovery<sup>7</sup>, 1990 to 1993

### Atlantic Canada

After posting employment growth on a par with the national average during the expansion, Newfoundland reeled under the double blow of the recession and the collapse of the fishery. The province lost 10% of its full-time and 6% of its full-year full-time workers (Chart B). By 1993, only 36% of the working-age population had full-time work, the worst full-time employment rate in the study period, and only 27% had full-year work, the lowest full-year rate in the country (Appendix).

In Prince Edward Island, the proportion of the working-age population with full-time work declined from 48% in 1990 to 44% in 1993. However, full-year employment rates remained fairly stable, fluctuating around 33%, suggesting that seasonal industries took the brunt of the recession's impact.

During the recession, both full-time and full-year employment in Nova Scotia fell more than 6%. These losses were among the worst

in the country. By 1993, full-time employment rates had dropped to 42%, and full-year to 34%.

In contrast, New Brunswick's full-time workers lost ground in 1991, but by 1993 their numbers were back up, and exceeded 1989 peak levels. Full-year employment did not fare so well: New Brunswick initially won back the employment it lost at the start of the recession only to fall back again in 1993. Despite this setback, employment rates remained relatively stable at a time when they were dropping in many other provinces.

### Central Canada

The full-time employment rate in Quebec dropped from 50% in 1989 to 46% in 1993. This decline reflects the loss of 5% of the province's full-time workers during the recession. Meanwhile, 7% of full-year workers disappeared, which pulled the full-year rate down to 38%.

Ontario's employment rates fell even further than Quebec's: both full-time and full-year rates dropped seven percentage points to 49% and 42%, respectively. The province suffered substantial employment declines as its stocks of full-time and full-year workers shrank 6% and 9%.

### Western Canada

Manitoba and Saskatchewan each lost about 4% of their full-time (and 1% and 5%, respectively, of their full-year) workers during the recession, amounting to a combined reduction of almost 30,000 full-time (and 19,000 full-year) workers between 1989 and 1993. Consequently, the proportion of the working-age population employed full time was down to 49% in Manitoba and 50% in Saskatchewan in 1993; full-year full-time employment also slid marginally in each province.

By 1993, full-time employment had fallen to 54% of the working-

age population in Alberta (while remaining the highest in Canada), and to 49% in British Columbia; these declines were mirrored in the rates of full-year employment. Although employment rates in these provinces did not remain high enough during the recession and its aftermath to keep up with growth in the working-age population,<sup>8</sup> between 1989 and 1993 the number of full-time workers actually rose 1% in Alberta and a substantial 7% in British Columbia. (The only other province to register an increase was New Brunswick.) British Columbia also benefited from an 8% gain in full-year workers.

## Summary

The proportion of working-age Canadians employed full time was about the same in 1993 as in 1983, while the proportion steadily working full year full time increased marginally. However, this observation masks the substantial gains made during the expansionary period of the mid to late 1980s following the 1981-82 recession, and the subsequent loss of most of these gains in the recession of the early 1990s. Nevertheless, some provinces weathered the latter recession better than others. Both full-time and full-year employment rose in British Columbia, and full-time employment increased in Alberta and New Brunswick.

Employment rates varied from region to region, reflecting not only the business cycle but the industry mix of provincial economies. The Atlantic provinces, which are highly reliant on seasonal industries, suffered the lowest employment rates throughout the period studied; meanwhile, Alberta and Ontario experienced the highest rates.

Although full-time work and steady, year-round employment do not seem in danger of disappearing in this country, neither has gained firm ground in recent years. □



## Notes

1 The Autumn 1994 issue of *Perspectives* contains five articles on the evolving work week covering such topics as hours worked, part-time jobs, and multiple jobholding. Three articles dealing with work schedules, based on the 1991 Survey of Work Arrangements, were published in the Autumn 1993 issue. Detailed statistical tables are available in the publication, *Work Arrangements* (Siroonian, 1993). A public-use microdata file containing survey results can be obtained for \$500. Contact Mike Sivy at (613) 951-4598; fax (613) 951-0562.

2 Although LFS data rebased to the 1991 Census are now available, revised SCF data are not; therefore, this article uses unrevised LFS data in order to maintain comparability between the series.

3 These declines may seem small, but they represent 242,000 fewer full-year full-time workers in 1990 and 323,000 fewer full-time workers in 1991.

4 The small proportion of individuals who choose to work part year, for example, students and retirees, would also exert a downward pressure on the rates of full-year employment.

5 In fact, whenever there is an increase in an employment rate, employment growth has more than compensated for working-age population growth. The opposite effect occurs when the rate decreases.

6 The apparent contradiction between relatively low employment rates and high employment growth in British Columbia may be explained by the composition of its working-age population; that is, because a large proportion of its working-age population is aged

65 and over, the employment rate denominators include many retired individuals, which dilutes the rate.

7 This study uses the start date of 1990 to examine the impact of the most recent recession. Employment changes are calculated using 1989 as the base year, the last year in which the labour market was unaffected by recession. The recovery is dated on the basis of growth in aggregate economic output.

8 The working-age population grew 7% in Alberta and 11% in British Columbia (the greatest provincial increase) in the 1989-93 period.

## Reference

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## Appendix

### Full-time and full-year employment rates\* by region, 1983 to 1993

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>All provinces</b>											
Full-time	48.1	48.8	49.4	50.2	51.2	52.1	52.6	52.1	49.7	48.4	47.9
Full-year, full-time	38.6	39.1	41.1	41.6	42.1	43.6	44.6	42.8	41.2	40.4	40.0
<b>Atlantic Canada</b>											
Newfoundland											
Full-time	38.2	38.0	37.7	38.5	38.9	40.7	41.6	41.1	39.7	37.0	36.2
Full-year, full-time	24.6	26.3	26.1	25.5	26.7	28.8	29.4	28.6	25.9	25.7	26.7
Prince Edward Island											
Full-time	45.1	45.2	45.7	45.7	46.3	47.9	47.4	48.0	44.9	44.9	44.0
Full-year, full-time	28.6	31.2	31.9	33.0	30.5	33.3	34.0	33.7	31.6	32.7	33.0
Nova Scotia											
Full-time	42.2	43.7	42.9	43.5	44.1	46.1	46.3	46.8	44.8	42.9	42.0
Full-year, full-time	31.9	32.7	34.8	33.2	35.9	36.9	37.1	37.5	34.3	32.8	33.6
New Brunswick											
Full-time	39.7	39.8	40.8	41.5	43.0	43.8	44.2	44.8	43.3	43.5	43.3
Full-year, full-time	29.1	30.1	31.7	31.7	32.2	32.0	35.6	34.2	34.7	35.7	33.4
<b>Central Canada</b>											
Quebec											
Full-time	45.5	46.6	47.1	47.7	49.1	50.1	50.2	49.8	47.5	46.3	45.6
Full-year, full-time	35.9	35.7	38.0	39.0	39.3	40.0	42.2	40.1	38.9	38.1	37.6
Ontario											
Full-time	50.7	51.9	52.8	53.9	55.0	55.8	56.0	54.8	51.3	49.6	49.0
Full-year, full-time	41.8	43.7	45.5	44.8	47.0	48.9	48.8	45.9	43.6	43.2	41.6
<b>Western Canada</b>											
Manitoba											
Full-time	49.4	50.2	50.6	50.9	51.2	51.1	51.3	51.2	49.3	48.1	48.7
Full-year, full-time	41.7	40.6	42.1	42.4	40.7	43.0	43.3	42.1	39.0	40.9	42.4
Saskatchewan											
Full-time	50.1	49.5	50.8	51.0	51.2	51.0	51.1	51.5	51.2	49.9	49.9
Full-year, full-time	40.5	40.6	42.5	41.7	41.6	40.3	42.3	42.7	41.9	41.0	40.8
Alberta											
Full-time	54.4	54.3	54.7	55.2	55.0	56.3	56.9	57.0	56.4	54.4	53.6
Full-year, full-time	43.3	42.0	45.6	44.2	44.1	46.0	47.4	47.6	46.2	43.8	44.2
British Columbia											
Full-time	45.2	44.8	45.3	46.5	47.5	48.4	50.8	50.5	49.1	48.8	48.8
Full-year, full-time	37.2	35.5	37.4	38.6	39.7	42.5	42.7	41.6	41.6	40.2	41.6

Source: Key labour and income facts in *Perspectives on Labour and Income*

\* Proportion of working-age population employed full time and full year

# Adult women's participation rate at a standstill

George Butlin

For several decades women's labour force participation increased each year without exception, transforming the Canadian labour market in the postwar period. However, since 1991 women's participation rate has declined and shows no sign of resuming its long-standing upward trend.

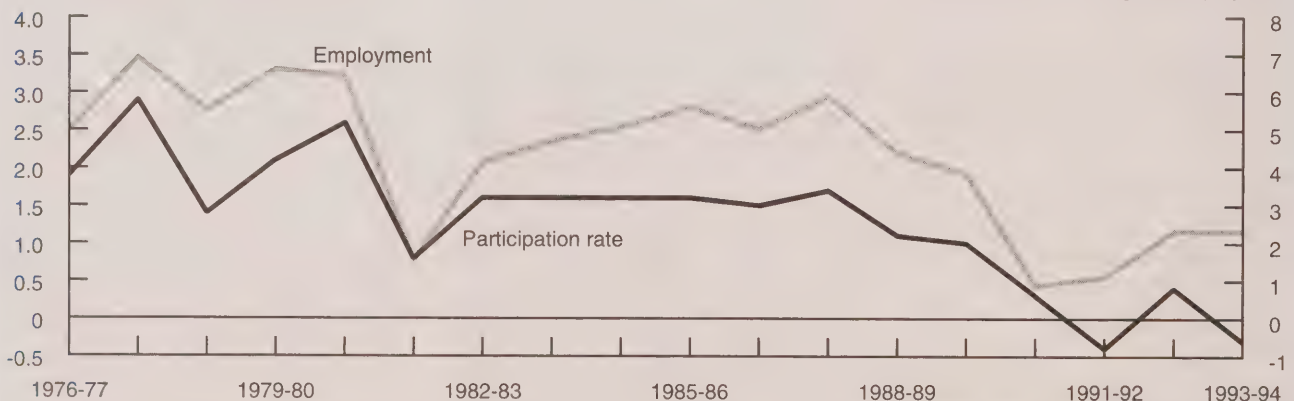
*Perspectives* has analyzed the 1991 decline in participation (Basset, 1994) and the failure of the previous trend to resume (Akyeampong, 1995). This note follows up the latter article. No attempt is made to explain why the historical upward trend has, at least

temporarily, halted. The objective is simply to determine whether there are certain groups contributing disproportionately to the "plateauing" of the rate. Their identification might suggest reasons for the decline that could be examined in future articles.

Chart A  
Women aged 25-54



Year-over-year  
% point difference in participation rate



Source: Labour Force Survey

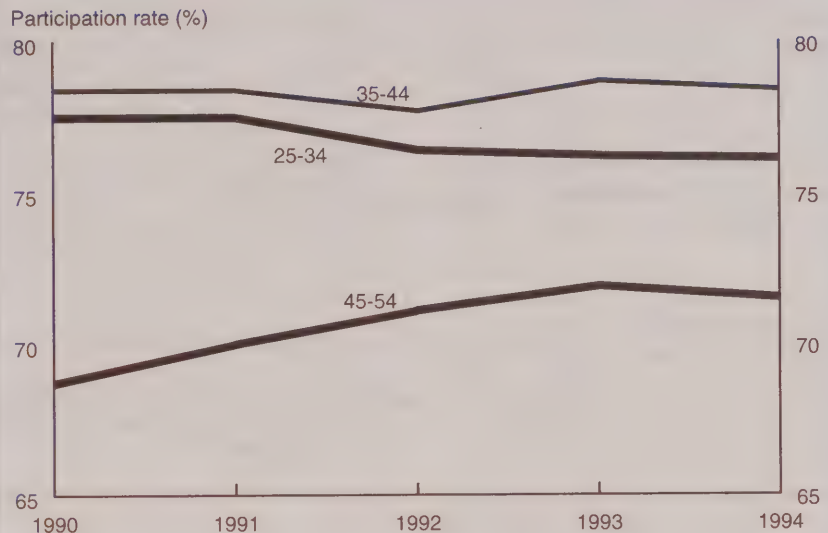
George Butlin was with the Labour and Household Surveys Analysis Division. He can be reached at 951-2997.



This note looks only at women aged 25 to 54, for a number of reasons. The rates for both male and female 15 to 24 year-olds have declined for several years, presumably an issue of age rather than gender.<sup>1</sup> The rate for women 55 to 64 has continued to increase despite the recent overall decline. For women 65 and over, there have been few changes for many years.<sup>2</sup>

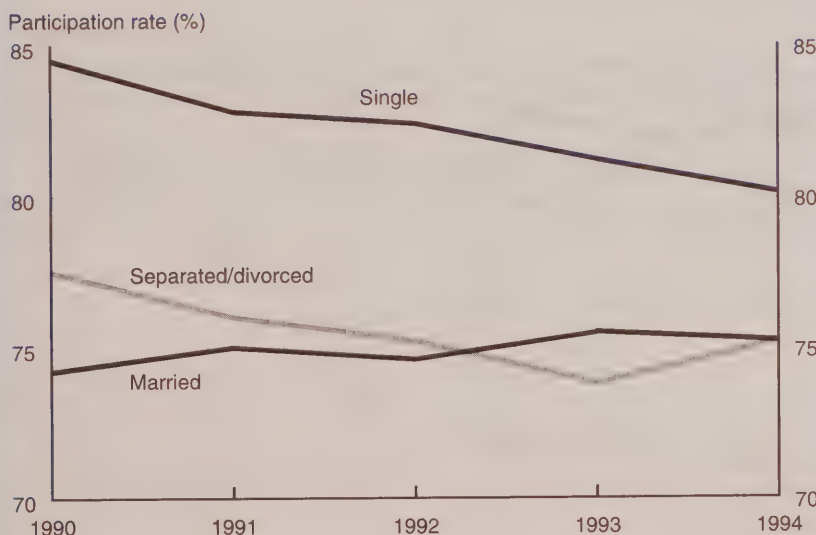
Until 1991, the postwar participation rate and employment of women aged 25 to 54 grew in tandem, regardless of economic conditions (Akyeampong, 1995). The two indicators then took diverging paths. Employment maintained a steady, upward trend, but participation fluctuated, declining for the first time in 1992, rising in 1993 and falling again in 1994 (Chart A). As a result, the group's 1994 participation rate matched that of 1990 (75.7%), while its level of employment increased by 6.8% (286,000).

**Chart B**  
**Adult women by age group**



Source: Labour Force Survey

**Chart C**  
**Women aged 25-54, by marital status**



Source: Labour Force Survey

## Findings

Women aged 25 to 34 were the only group studied to record a decline between 1990 and 1994, from 77.5% to 76.1% (Chart B). Among 35 to 44 year-olds there was little change, while the rate actually increased for the 45 to 54 age group (from 68.7% to 71.5%).

Among married women the participation rate increased slightly from 1990 to 1994. However, there was a decline in the rate for single (never-married) and divorced or separated women (Chart C), especially among 25 to 34 year-olds. For never-married women in this age group the rate fell by 5.6 percentage points, and for divorced or separated women it dropped 7.4 points.<sup>3</sup>

The participation rate for women with husbands not employed fluctuated over the period, with the 1994 rate returning to the 1990

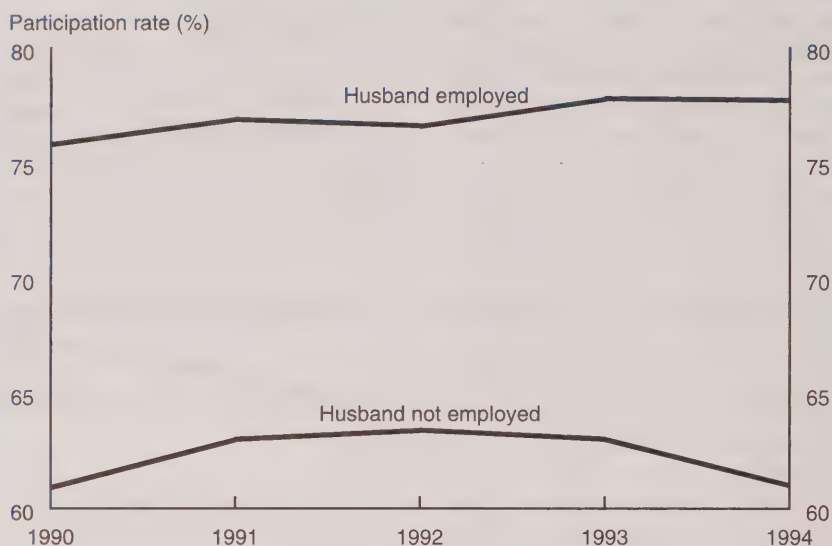
level (Chart D). Women with employed husbands experienced an increase, from 75.8% to 77.7%.

There was a slight increase in the participation rate among married women with or without children under 16. However, the rate among female lone parents with pre-school children declined from 57.4% in 1990 to 53.5% in 1994; those with children aged 6 to 15 experienced a drop from 75.0% to 72.5% (Chart E).

Women in Ontario showed the largest decline in participation rates across regions, especially in 1992. Their rate dropped from 78.9% in 1990 to 77.7% in 1994 (Chart F), which significantly affected the national rate. Quebec, with the second largest population, maintained a steady rate, at around 71.7%. The rate declined slightly in the Atlantic provinces overall, and increased in the Prairies. British

Chart D

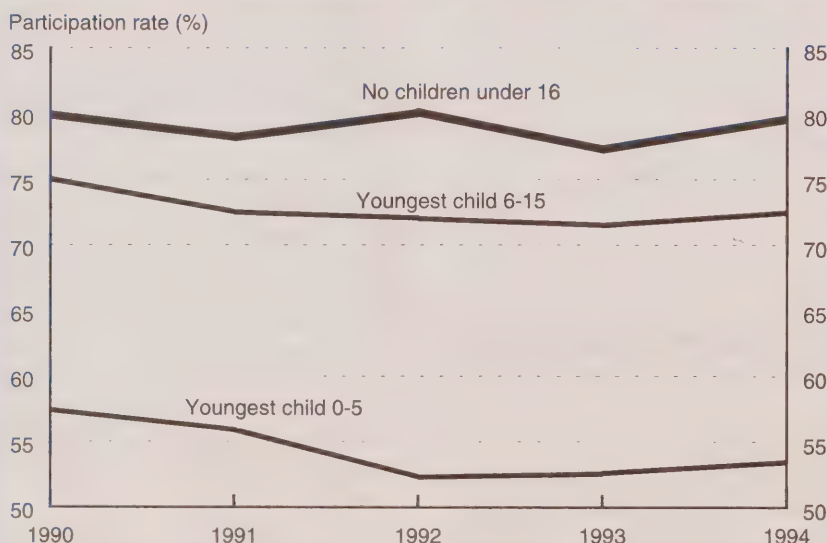
**Married women aged 25-54, by employment status of husband**



Source: Labour Force Survey

Chart E

**Female lone parents aged 25-54, by presence and age of children**



Source: Labour Force Survey

Columbia, which maintained employment growth for this period, saw women's participation rate increase from 75.9% in 1990 to 77.0% in 1994.

Women with a university degree maintained their rate of participation from 1990 to 1994 (Chart G). In contrast, the rate declined from 49.7% to 46.2% for those with less than nine years of schooling, and dropped from 65.3% to 61.0% for those with some secondary schooling but no diploma.

## Summary

The brief analysis of the demographic and geographic groups considered here does not point to any single source responsible for the levelling of participation rates among 25 to 54 year-old women.

However, there is evidence of a downward trend on the part of several groups: specifically, among



those aged 25 to 34, those not currently married, and those with limited education.

### 1995 update

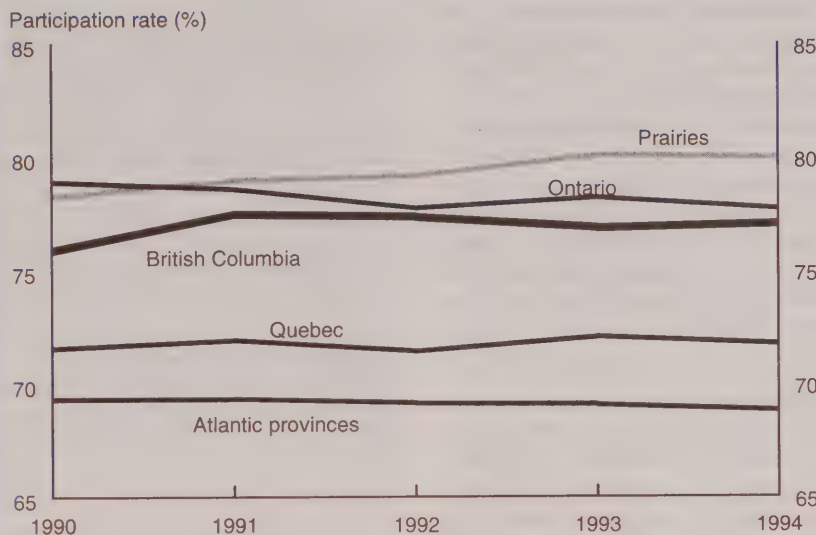
In the context of a stagnating labour market (see Sheridan in this issue), seasonally adjusted participation rates of adult women aged 25-54 fluctuated around 76.1% in the first half of 1995.



### Notes

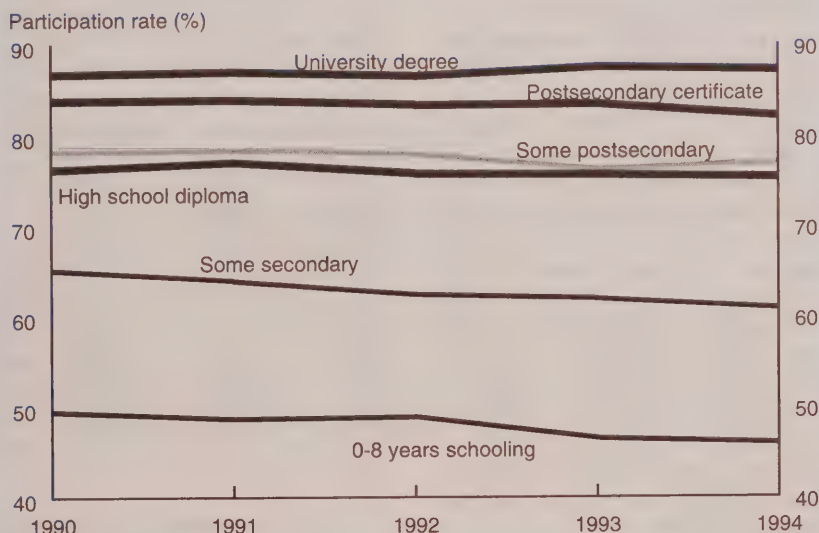
1 The difficult labour market conditions of the early 1990s may have restricted the number of entry-level positions available, thereby inducing many youths to stay in or return to school (Basset, 1994; Sunter, 1994). As a result, the labour force participation of both male and female youths has been falling steadily since 1989. During the period under study, the participation rate for women aged 15 to 24 declined from 67.0% in 1990 to 60.6% in 1994.

**Chart F**  
**Women aged 25-54, by region**



Source: Labour Force Survey

**Chart G**  
**Women aged 25-54, by level of education**



Source: Labour Force Survey

2 From 1990 to 1994, the participation rate for women aged 55 to 64 showed a constant increase, from 35.5% to 37.4%, while the rate for those aged 65 and over fluctuated around 4%.

3 Widowed women were not included in this study since they represent only around 1% of the female population aged 25 to 54.

### References

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# Recent trends in earnings

Stephen Johnson\*

In 1994, for the first time in four years, employers expanded their workforces significantly. The expansion was spread across all provinces and territories and a majority (58%) of the industries covered by the Survey of Employment, Payrolls and Hours (SEPH) (see *Data source and definitions*). The last time growth was so widespread was 1989, the peak year of the previous expansion.

*Perspectives'* review of the 1994 labour market, published this spring (Akyeampong, 1995), examined employment changes from a demographic and broad industry perspective using data from the household-based Labour Force Survey (LFS). This article uses annual average data from the employer-based SEPH.<sup>1</sup> In addition to providing a more detailed industry breakdown, the SEPH data complement the previous study by adding information on average earnings, regular paid hours of work, and paid overtime.

## Earnings up more than inflation...

Although the number of employees increased significantly in 1994, average earnings increased by less than 2% for a second consecutive year, reaching \$567.11 per week. But with consumer prices rising only 0.2% for the year, real earnings increased for the second time in the last three years (Chart A).

Growth was most pronounced for commissioned agents and working owners, whose earnings

## Data source and definitions

The Survey of Employment, Payrolls and Hours provides monthly estimates of payroll employment, paid hours and earnings for all provinces and territories. The survey covers all employers, except those in agriculture, fishing and trapping, private households, religious organizations, the military and foreign governments.

An employee is any person drawing pay for services rendered or for a period of absence and for whom the employer must complete a Revenue Canada T-4 Supplementary Form.

rose 9.2%. Weekly earnings for employees paid by the hour rose 2.6%, thanks to increases in both hours and hourly earnings (for which overtime was partly responsible). Hourly earnings excluding overtime rose 1.3%, down sharply from the 3.6% increase in 1992, helping to contain businesses' direct labour costs.

## ... but not in all industries

As with all global statistics, the overall increase in average weekly earnings conceals as much as it reveals. For the major industry groups the year-to-year change ranged from a decline of 0.4% in educational and related services to an increase of close to 7% in real estate and insurance agencies. By and large, however, increases were greater in goods-producing industries, which were experiencing strong demand for their products, especially in the export markets. This strength in turn boosted wholesale trade activity related to these products. In contrast, the average 0.4% increase for the nearly three million employees in government, educational, and health and social services helped to restrain overall earnings growth.

Working owners of incorporated firms are included under this definition; those with unincorporated businesses are excluded, although they must still report their employees.

Hourly paid employees are those whose basic wage is expressed as an hourly rate.

Salaried employees are paid a fixed amount for at least a week.

Other employees are those paid by commission, piece rate, profit sharing, mileage allowance, etc.

## ... and partly because of longer hours

Not only did employment grow in 1994, but working hours increased. Employees paid by the hour averaged 30.9 hours per week in 1994, the second consecutive year that hours increased and the highest level since 1990. The increase was widespread – employees in most industries worked longer regular hours as well as more overtime. More than half the 12% increase in total paid overtime can be attributed to manufacturing: an increase of about 300,000 hours over the previous year.

## Good times for resources

Strong demand for wood products, both domestically and internationally, boosted employment in logging in 1994. Mirroring the employment growth, weekly earnings in logging operations grew substantially (4.3%), especially for piece rate workers and salaried employees.

With the exception of metal and non-metal mines, which reduced employment for the fifth consecutive year, all industries in mining, quarrying and oil wells reported

\* Adapted from an article in *Annual Estimates of Employment, Earnings and Hours 1983-1994 (Catalogue 72F0002XPB, 1995)*. Stephen Johnson is with the Labour Division. He can be reached at (613) 951-4061.



gains in 1994. Activity in oil and gas fields surged in 1994 as drilling activity and production rose in response to strong demand from the United States. Providers of services incidental to crude petroleum and natural gas recorded their highest employment levels since 1988. With increased shipments to Japan and the re-opening of some operations, coal mine operators also increased employment, albeit slightly, following two years of decline. Although accounting for only a small number of employees, quarries and sand pit operators reported double-digit growth in employment, perhaps in response to more activity in non-residential and industrial construction.

Average weekly earnings in mining, quarrying and oil wells remained the highest of all major industry groupings – reaching \$964.83 in 1994, an increase of 0.8% from the previous year.

### Strong demand for manufactured products

In response to a burgeoning demand for manufactured goods – new orders and shipments grew sharply in 1994 – manufacturers expanded employment for the first time since 1989. (And with manufacturers' record levels of shipments in 1994, employment in truck transportation rose 2.9% to 131,000 – its highest level since 1990.) Despite the growth, employment levels remained significantly lower than the peak reached in 1989. The gains were concentrated in a few industries – wood, transportation equipment, machinery, and fabricated metal products. These industries also recorded longer hours, which boosted weekly earnings (Chart B). Weekly earnings for all manufacturing employees stood at \$685.07, an increase of 2.4% over 1993.

### Longer hours in construction

Construction firms, particularly in Quebec, increased employment in 1994 as gains by non-residential building and development contractors, trade contractors and industrial construction companies outweighed a second consecutive decline among residential construction companies. The demand for new residential housing dropped in 1994 as mortgage rates rose, resulting in less activity and lower employment in the industry. However, the number of employees involved in industrial construction activity continued to expand, growing by nearly a quarter.

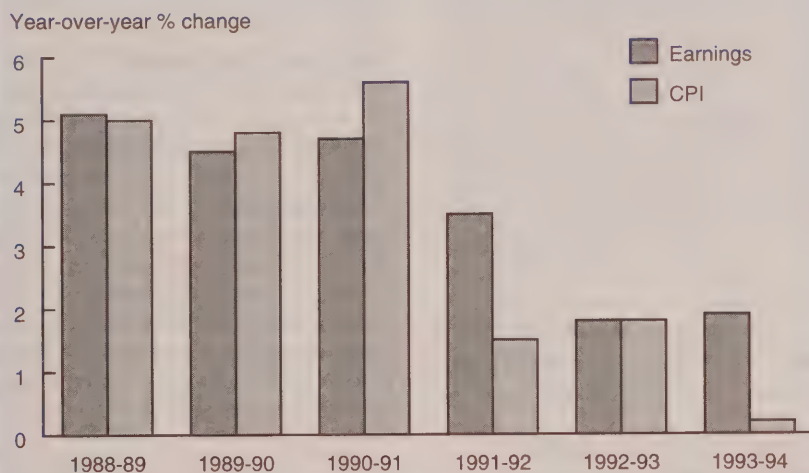
Employees earned on average 2.8% more than in 1993, a result mainly of longer hours rather than higher hourly earnings. If paid by the hour (two-thirds of all construction employees), they worked an average of 37.7 hours per week, the longest average work week since 1990. The 3.0% increase in hours resulted in part from a surge in overtime. Employees in non-residential building and development, who worked 2.2 hours more per week than in 1993, reported one of the highest growth rates. Excluding the impact of overtime, hourly earnings were unchanged, with hourly paid employees in three of the six construction industries<sup>2</sup> reporting declines.

### Powering down

The number of workers in electric power companies declined in 1994 in most provinces, notably in Ontario. Owing in part to moderate growth for salaried employees (over two-thirds of all employees in communication and other utilities), weekly earnings for all employees in this industry rose 0.3% to \$765.09. Employees paid by the hour worked fewer hours and saw virtually no change in hourly earnings (excluding overtime) – a dramatic turnaround from 1992 when hourly earnings soared around 7.0%.

Chart A

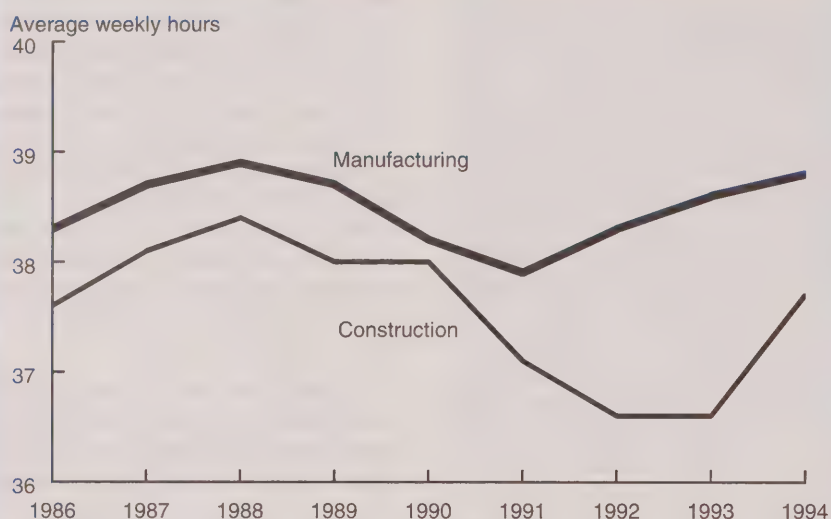
Since 1992, the rise in average weekly earnings has exceeded or matched the rate of inflation.



Sources: Survey of Employment, Earnings and Hours, and Consumer Price Index (CPI)

Chart B

**Following the recent recession, hours have picked up in manufacturing and construction.**



Source: Survey of Employment, Earnings and Hours

### Wholesale growth

Echoing the surge in manufacturing, wholesalers reported a strong year in 1994. Sizeable gains in employment and earnings paralleled the strong growth in trade volumes. Gains were concentrated among wholesalers of machinery, equipment and supplies and of metals, hardware and building materials. The impact of the increased activity was especially evident in average weekly earnings, which rose 2.5%, led by strong growth for commissioned agents. The most substantial gain was recorded by employees in the wholesale drug and tobacco industry. Employees in wholesale apparel and dry goods, and those in farm products also reported considerably higher earnings.

### Longer hours, higher earnings in retail trade

The number of employees in retail trade declined slightly in 1994, but with higher retail sales, employees

worked longer hours and earned more. Retail employees reported strong gains in weekly earnings, up 3.0% from the previous year to \$339.51. Employees paid by the hour, nearly three-quarters of retail employment, realized similar growth resulting from increased weekly hours and higher hourly earnings. The average number of hours worked per week reached its highest level since 1990 (26.3 hours). Commissioned agents and salaried employees also recorded higher earnings for the year. Employees in most retail industries earned more in 1994, with the notable exceptions of general retail merchandising and household furniture.

### Business services bolstered by computer and related services

Led by providers of architectural, engineering and other scientific and technical services, employment agencies and personnel suppliers, and computer and related services,

business service companies increased employment for a second consecutive year. These gains offset more than half the employment loss between 1990 and 1992.

Employment in the computer and related service industry rebounded in 1994 following a small decline the previous year. Since 1990, the number of workers in computer and related services has increased 18.6% and the industry now employs more people than ever. Employment in the offices of architects, engineers and other scientific and technical services also grew in 1994, perhaps in relation to the start of the federal government's infrastructure projects and other industrial and heavy construction activities. On the other hand, employment in advertising agencies dropped for the fifth consecutive year.

Coincident with employment growth, earnings grew substantially. Employees in business service industries received \$607.24 per week, a 3.6% increase from 1993. Employees in computer and related services recorded the strongest weekly earnings growth of all the business services, increasing 9.3% from 1993 to \$795.61.

### Public administration

The number of employees in public administration ebbed 0.9% to 704,000, as provincial and federal governments continued to reduce their workforces. The largest decline was in provincial administration, as virtually all provinces and territories employed fewer workers in 1994. The most substantial declines occurred in the smaller provinces, which reported their lowest levels of employment since 1989.

Public administration employees earned on average \$752.88, an increase of 0.8% from 1993. The smallest gains came in federal administration where earnings grew only marginally (about \$2.00 per week). Prince Edward Island, Que-



bec and Alberta governments paid employees less on average than they had the previous year. Overall growth in earnings was balanced by the drop in employment, resulting in no increase in the total wage bill for 1994.

### Education payrolls drop

Despite a marginal increase in the number of employees, total payrolls for educational and related services declined in 1994, owing to a 0.4% drop in average weekly earnings. An increase of 1,000 employees was the net result of gains in elementary and secondary schools, and libraries, museums and other educational services, and losses in university and postsecondary non-university education.

Although employment increased at the national level it decreased in most provinces. With the exception of Quebec and British Columbia, employment and payrolls were reduced in all provinces. Newfoundland and Saskatchewan reported the largest employment declines in 1994, followed closely by New Brunswick and Alberta. In addition, employees in half the provinces recorded lower weekly earnings. The combined effect of lower employment and lower earnings reduced government spending on payrolls in most provinces.

### Hospital employment continues to decline

Establishments providing health and social services employed more workers in 1994, up 0.6% from 1993. Employment grew even though hospitals, which employ nearly one of every two employees in the industry, continued to reduce employment – 10,000 fewer people

in 1994. Alberta, Ontario and Nova Scotia accounted for nearly all of the reduced employment in hospitals. That loss was more than offset by gains in other institutional health and social services and non-institutional health services. These trends over the past two years suggest a shift from hospitals to non-institutional health care.

Employees in health and social services received on average \$504.63 per week, 1.2% more than the previous year. Hospital employees' earnings increased to a lesser extent because of continued reductions in weekly hours. Employees paid by the hour averaged less than thirty hours per week in 1994.

### Fewer employees, longer hours in accommodation, food and beverage services

The number of employees in accommodation, food and beverage services dropped, as hotels and other accommodation services, mainly in Ontario and Quebec, recorded fewer workers in 1994. Food and beverage establishments, however, reported little change. While employment declined overall, the number of hours worked per week increased substantially. Employees paid by the hour, representing more than 80% of the industry, worked an average 24.0 hours per week, the highest level since 1988. The growth in hours was widespread and contributed to a 4.3% increase in weekly earnings for all employees.

### Summary

The labour market generally turned in a strong performance in 1994.

Employment increased in all regions and in most private-sector industries. Employees' purchasing power grew as earnings outpaced inflation. Commissioned agents' and working owners' salaries, which are closely tied to business performance, led the earnings growth. As well, employees worked longer regular hours and more overtime.

However, much of the economic growth in 1994 was in response to foreign demand. If exports resume their upward trend in the latter part of 1995, the major performers of 1994 should again contribute to a strong economy. But if foreign demand remains flat, as it did in the first quarter of the year, it may be difficult to generate more jobs or to increase earnings. □

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### ■ Notes

1 The SEPH sample comprises all establishments with 300 or more employees, a sample of those with 100 to 299 employees, and a sample of administrative records for those with fewer than 100 employees. Employees are split into salaried, hourly paid and other.

2 Non-residential building and development; industrial construction, and trade contracting reported declines; residential building and development, highway and heavy construction, and services incidental to construction reported increases.

### ■ Reference

Akyeampong, E.B. "The labour market: Year-end review." *Perspectives on Labour and Income* (Statistics Canada, Catalogue 75-001E) 7, no. 1 (Spring 1995): supplement.

**Appendix****Employment, earnings and hours\* by major industry, province and territory**

	1990	1991	1992	1993	1994
<b>Industry</b>					
Industrial aggregate**					
Employment ('000)	11,146.1	10,549.5	10,246.9	10,271.4	10,447.1
Average weekly earnings (\$)	505.14	528.60	547.01	556.76	567.11
Average weekly hours	31.3	30.7	30.5	30.6	30.9
Logging and forestry					
Employment ('000)	61.3	60.6	59.4	63.0	63.9
Average weekly earnings (\$)	643.46	679.83	697.27	709.99	730.83
Average weekly hours	39.3	37.6	37.7	38.7	38.3
Mining, quarrying and oil wells					
Employment ('000)	152.3	145.2	128.5	119.7	130.4
Average weekly earnings (\$)	863.29	908.78	935.10	956.81	964.83
Average weekly hours	40.0	39.5	39.8	39.6	39.8
Manufacturing					
Employment ('000)	1,885.4	1,691.5	1,599.2	1,596.7	1,631.6
Average weekly earnings (\$)	598.97	624.39	652.54	668.95	685.07
Average weekly hours	38.2	37.9	38.3	38.6	38.8
Construction					
Employment ('000)	578.9	483.0	441.4	423.4	433.4
Average weekly earnings (\$)	622.96	635.38	637.40	639.74	657.87
Average weekly hours	38.0	37.1	36.6	36.6	37.7
Transportation and storage					
Employment ('000)	502.9	462.9	456.4	455.0	458.5
Average weekly earnings (\$)	605.48	639.40	652.99	664.25	675.48
Average weekly hours	37.3	36.8	36.5	36.3	36.5
Communication and other utilities					
Employment ('000)	399.3	397.6	395.2	386.3	391.4
Average weekly earnings (\$)	686.21	728.57	757.06	762.74	765.09
Average weekly hours	38.7	39.3	38.6	37.8	37.5
Wholesale trade					
Employment ('000)	637.8	613.2	601.6	594.7	608.2
Average weekly earnings (\$)	538.75	557.57	579.21	590.93	605.56
Average weekly hours	35.1	35.0	34.7	35.2	35.4
Retail trade					
Employment ('000)	1,517.7	1,392.6	1,332.9	1,354.3	1,350.0
Average weekly earnings (\$)	306.86	317.77	320.80	329.65	339.51
Average weekly hours	26.8	26.1	25.6	26.0	26.3
Finance and insurance					
Employment ('000)	493.9	490.9	482.0	478.2	462.9
Average weekly earnings (\$)	566.55	599.19	626.86	668.49	670.14
Average weekly hours	25.6	24.5	23.8	24.2	24.9
Real estate and insurance agencies					
Employment ('000)	214.8	205.1	190.8	186.0	180.3
Average weekly earnings (\$)	488.01	483.25	520.44	521.78	556.88
Average weekly hours	27.9	25.8	26.1	26.8	27.0
Business service					
Employment ('000)	585.5	540.9	511.0	528.8	560.2
Average weekly earnings (\$)	533.59	557.60	583.53	586.14	607.24
Average weekly hours	29.0	29.2	29.6	29.4	29.7
Public administration					
Employment ('000)	702.2	718.5	719.5	710.2	703.6
Average weekly earnings (\$)	689.12	701.92	727.64	746.59	752.88
Average weekly hours	--	--	--	--	--
Educational service					
Employment ('000)	888.1	905.7	916.3	932.2	933.3
Average weekly earnings (\$)	605.91	640.33	667.74	674.05	671.41
Average weekly hours	22.7	18.9	19.1	19.1	20.3
Health and social service					
Employment ('000)	1,128.0	1,135.8	1,135.3	1,138.9	1,145.3
Average weekly earnings (\$)	435.37	466.91	485.06	498.45	504.63
Average weekly hours	28.1	28.1	28.1	28.0	27.9



**Appendix – concluded****Employment, earnings and hours\* by major industry, province and territory**

	1990	1991	1992	1993	1994
<b>Industry – concluded</b>					
Accommodation, food and beverage service					
Employment ('000)	793.2	732.6	721.4	748.1	741.2
Average weekly earnings (\$)	206.38	209.49	215.84	217.77	227.19
Average weekly hours	23.9	23.6	23.5	23.4	24.0
Other services					
Employment ('000)	604.8	573.5	556.1	556.0	593.9
Average weekly earnings (\$)	343.50	361.59	366.96	377.46	381.34
Average weekly hours	26.1	26.1	25.0	25.6	25.7
<b>Provinces and territories</b>					
Newfoundland					
Employment ('000)	155.8	146.3	141.3	139.8	145.9
Average weekly earnings (\$)	474.83	497.36	508.57	527.12	532.85
Average weekly hours	34.8	33.9	33.6	34.0	33.9
Prince Edward Island					
Employment ('000)	39.4	38.2	38.6	38.9	39.7
Average weekly earnings (\$)	416.92	429.29	444.44	454.00	453.79
Average weekly hours	31.4	31.0	30.4	30.7	31.1
Nova Scotia					
Employment ('000)	305.5	291.5	284.1	285.3	292.1
Average weekly earnings (\$)	454.25	474.73	489.59	494.75	496.91
Average weekly hours	32.2	31.6	31.7	31.7	32.1
New Brunswick					
Employment ('000)	243.1	237.9	230.3	232.0	234.4
Average weekly earnings (\$)	455.92	479.89	493.94	504.38	503.08
Average weekly hours	33.8	33.4	33.2	33.5	33.7
Quebec					
Employment ('000)	2,747.0	2,625.6	2,512.4	2,507.7	2,531.1
Average weekly earnings (\$)	493.28	513.75	532.55	539.30	544.18
Average weekly hours	32.1	31.7	31.4	31.5	31.6
Ontario					
Employment ('000)	4,557.1	4,219.6	4,079.2	4,057.54	4,092.3
Average weekly earnings (\$)	526.40	553.83	576.52	588.95	604.05
Average weekly hours	31.1	30.8	30.6	30.7	31.1
Manitoba					
Employment ('000)	407.1	383.8	383.1	381.9	392.6
Average weekly earnings (\$)	459.92	476.51	488.07	492.30	499.34
Average weekly hours	31.1	30.2	30.1	29.7	30.4
Saskatchewan					
Employment ('000)	317.8	302.6	303.4	302.0	305.3
Average weekly earnings (\$)	444.14	463.77	470.37	474.06	487.08
Average weekly hours	28.4	28.0	28.2	27.9	28.7
Alberta					
Employment ('000)	1,067.9	1,026.0	994.9	990.2	1,038.2
Average weekly earnings (\$)	502.60	528.81	543.75	551.98	552.65
Average weekly hours	30.2	29.5	29.3	29.7	30.1
British Columbia					
Employment ('000)	1,272.8	1,246.6	1,247.5	1,303.8	1,341.9
Average weekly earnings (\$)	511.06	530.86	545.42	557.50	577.15
Average weekly hours	30.4	29.4	29.1	29.1	29.4
Yukon					
Employment ('000)	11.6	11.0	11.6	11.3	11.7
Average weekly earnings (\$)	591.53	636.48	678.98	679.26	686.56
Average weekly hours	34.1	31.3	31.0	30.6	32.4
Northwest Territories					
Employment ('000)	21.1	20.3	20.5	21.1	22.0
Average weekly earnings (\$)	665.90	705.85	713.45	703.40	704.37
Average weekly hours	33.4	33.5	33.1	32.1	33.0

Source: Survey of Employment, Payrolls and Hours

\* Employment and average weekly earnings estimates cover all employees. Average weekly hours refer to employees paid by the hour. Average weekly earnings and average weekly hours include overtime.

\*\* For 1994, the industrial aggregate includes employers not classified by industry.

# What's new?

## ■ JUST RELEASED

### ■ *Annual estimates of employment, earnings and hours*

The publication *Annual Estimates of Employment, Earnings and Hours, 1983 to 1994* contains data from the Survey of Employment, Payrolls and Hours. It presents annual average data on the number of employees, average weekly and hourly earnings, payrolls and so on. Data are published at the national, provincial and territorial levels, and for more than 200 industry groups.

The publication also includes a "1994 year-end review," which documents the first significant expansion in employment in four years (175,000 more workers than in 1993), the 1.9% rise in earnings (well above the inflation rate of 0.2%), and the 12.2% increase in overtime hours. For details, see the article, "Recent trends in earnings" in this issue.

*Annual Estimates of Employment, Earnings and Hours, 1983 to 1994* is available in hard copy (Catalogue 72F0002XPB) for \$75, on diskette (Catalogue 72F0002XDB) for \$100, or both together (Catalogue 10-3000XZB) for \$150. To order, or for more information, contact Sylvie Picard, at (613) 951-4090, or fax (613) 951-4087. □

### ■ *Insights into work, education and retirement: GSS Cycle 9*

In 1994, Cycle 9 repeated the education, work and retirement content first covered in the 1989 General Social Survey (GSS), and added two topics on social origins and work interruptions. The Cycle 9 microdata file, including complete documentation, is now being released.

Cycle 9 collected extensive information on education, including the highest level of schooling achieved, the field of study, the most recent educational program, plans for future education, and activities after studies were completed, including the first job held. Information was also collected on work history, including the job held five years preceding the survey, the last job (if no current job) and the current job. Information about current labour market activity covers such topics as occupation and industry, hours of work, supervisory duties, union membership, stress in the work environment, computer use, and work rewards

(monetary, psychological and other). New material concerns the extent of work interruptions during the previous five years and their impact on the respondents' job situation. Expanded questions on retirement consider the quality of life since retiring, jobs held since official retirement, the reason for returning to the labour market, working conditions and so on. New data about the educational attainment and occupations of the respondents' parents help to identify social origins.

Data from GSS Cycle 9 are now available in several formats: an information package containing a general overview; a fact sheet on computer use in the workplace; and a public use microdata file. An analytical publication on the retired population is expected to be released in summer 1996, and analytical articles are planned for *Perspectives* and *Canadian Social Trends*.

Among the highlights of interest to *Perspectives* readers:

- 48% of Canadian workers were using a computer at work in 1994 (45% of males and 52% of females), compared with 35% in 1989;
- Canadian workers spend an average of 18 hours a week using computers on the job;
- 27% of retired Canadians left work because of health problems; 13% of retirees have worked in a paying job since retiring;
- in 1994, about half of workers aged 15 to 24 held a part-time job or were doing temporary or contract work; 55% of female workers in that age group had a non-standard job.

For more information about the General Social Survey, Cycle 9, contact Pierre Turcotte at (613) 951-0878, or fax (613) 951-0387. □

### ■ *Training still important to employers in 1993*

Results of the 1994 Adult Education and Training Survey (AETS) are now available in a public use microdata file. The AETS was conducted in about 42,000 households as a supplement to the January 1994 Labour Force Survey, and the data are comparable with the 1992 AETS. Data were collected on employer-related and other training. Results show that employers continued to provide training to their employees during the recent recession.



The AETS covers such topics as subject matter and duration of courses taken in the calendar year; who paid tuition and other expenses; the method of instruction and location of training; and workers' socioeconomic characteristics such as income, education, industry and occupation. Data were collected separately for training *programs* – defined as a series of courses that lead to a certificate, diploma or degree upon completion – and for training *courses*.

Highlights of the 1994 AETS include the following:

- 15% of all Canadians aged 17 and over received some employer-supported training in 1993;
- employers paid the fees or tuition for 70% of programs and for 81% of courses taken by those who received employer support.

For more information, or to order the 1994 Adult Education and Training Survey microdata file, contact Mike Sivyer at (613) 951-4598, or fax (613) 951-0562. □

### ■ **Employment equity to 2016**

Population projections up to the year 2016 are now available for Aboriginal peoples, one of the four federally legislated employment equity designated groups. *Projections of Canada's Population with Aboriginal Ancestry, 1991-2016* covers registered Indians, Inuit, Métis, non-status and other Indians. The report presents the demographic characteristics of the Aboriginal population and projects three growth scenarios – slow, medium and rapid – taking into account the following components of growth: fertility, mortality and Bill C-31 reinstatements. The report estimates that the population with Aboriginal ancestry will increase from one million in 1991 to between 1.5 million and 1.7 million by 2016. The average growth rate will remain higher than overall Canadian population growth, and the regional distribution will remain about the same, with over half of the Aboriginal population living west of Ontario. By 2016, the proportion of registered Indians among the total Aboriginal population could increase to 46%, that of Inuit and Métis may remain at 5% and 18%, respectively, and the proportion of non-status and other Indians could drop to 32%. The median age of the Aboriginal population will increase from 22.5 years in 1991 to between 28.8 and 30.9 years in 2016.

Population projections for women are covered in the annual publication, *Population Projections for Canada, Provinces and Territories, 1993-2016* (Catalogue 91-520), while projections for the two remaining designated groups – visible minority groups and persons with disabilities – are scheduled for release in winter 1995.

Diskettes offering *A Profile of Canada's Visible Minority Population* (Catalogue 89F0037XDB) and *A Profile of Persons with Disabilities (Limited at Work/Perception)* (Catalogue 89F0038XDB) are available now. The profiles are based on the 1991 Census and the Health Activity Limitation Survey, respectively, and provide an extensive array of demographic and socioeconomic variables, including detailed age group, mother tongue, official languages spoken, education, labour market activity, occupation and industry, income and earnings, and mobility over the last five years. In the profile of the visible minority population, data are cross-tabulated by province for each of the following visible minority groups: Blacks, South Asians, Chinese, Koreans, Japanese, South East Asians, Filipinos, other Pacific Islanders, West Asians and Arabs, Latin Americans, and multiple visibility minorities. The profile of persons with disabilities includes information on the nature and severity of the disability, and any special accommodation required for work. Diskettes include software to enable users to create and print tables and charts. Profiles are available in hard copy for regions only.

For more information, contact the Employment Equity Data Program at (613) 951-0247, or fax (613) 951-0387. To order, contact any Statistics Canada Reference Centre, or Marketing Division, Sales and Service, Statistics Canada, Ottawa K1A 0T6; fax (613) 951-1584. Or call toll free 1 800 267-6677. □

### ■ **Characteristics of innovative firms studied**

In 1992, Statistics Canada conducted a survey to assess the impact of the changing economic climate – specifically that of globalization and increased competition – on small and medium-sized firms (fewer than 500 employees and assets of less than \$100 million). Using data from the survey, analysts in the Analytical Studies Branch have developed a measure to identify more and less innovative firms. (For information about the Survey of Growing Small and Medium-Sized Companies, see *Strategies for Success*, Catalogue 61-523RE.)

The innovation measure, used in the three studies described below, is rather complex: innovation encompasses management techniques, organizational structure, production processes, staff training, equipment design and use of materials – all of which interact uniquely in each firm. The innovation measure developed by the authors accounts for this interplay, employing a wide range of variables to identify innovative firms. The adoption of innovative measures (such as use of technology, use of R&D incentives, and R&D capability), and the firm's belief that innovation contributes to its growth, factor heavily in the meas-

ure. Specific innovation strategies are also weighted in the measure, like the development of new or the refinement of current technology, more efficient use of new or existing materials, adoption of process control, and use of traditional sources of innovation (patents and the firm's own R&D unit). Other variables capture the intensity of the search for innovative ideas and processes from internal and external sources (for example, from the marketing unit, production unit, customers and suppliers). The percentage of total investment devoted to R&D, and the proportion of the firm's workforce employed in the R&D unit are also used to generate the innovation measure.

*Business Strategies in Innovative and Non-innovative Firms in Canada*

J.R. Baldwin and J. Johnson  
Research Paper Series No. 73

The paper examines the differences in policies pursued by innovative and non-innovative firms, and concludes that innovative firms place more emphasis on human resources, by devoting more effort to both formal and informal training; financing, particularly that provided by venture capital, public equity and parent companies; marketing, product quality and customer service; economical and efficient production processes and techniques; government programs, such as export incentives, industrial support, and tax incentives; and good management. A commitment to innovation is found to be the strongest predictor of success in terms of faster growth, larger market share and greater profitability.

*Human Capital Development and Innovation: The Case of Training in Small and Medium-sized Firms*

J.R. Baldwin and J. Johnson  
Research Paper Series No. 74

This paper investigates the factors that influence a firm's decision to train employees, and its expendi-

tures on that training. The incidence of training is found to be closely related to the presence of innovation: training is necessary to upgrade the skills and knowledge of employees in rapidly changing firms. There is also a strong relationship between training and the emphasis placed on labour skills, product quality, customer service and adherence to a total quality management strategy.

*Innovation: The Key to Success in Small Firms*

J.R. Baldwin  
Research Paper Series No. 76

The growth of small and medium-sized firms is commonly attributed to their flexibility, efficient administration, high quality products and customized service to niche markets. This study finds that while these factors may be important, there are no statistically significant differences in management, employee skills, product quality, and operational flexibility of more successful firms compared with less successful firms. (Success is defined by growth in market share, productivity of capital and labour, and profitability.) However, across a wide range of industries, innovation scores are significantly higher for the more successful firms in terms of the following: research and development capabilities, particularly the pursuit of a research agenda; reaching new markets, especially export markets; and obtaining new technology, whether through development of new technology or improvement of existing technology.

To order copies of these research papers, contact your nearest Statistics Canada Reference Centre, or write to the Publications Review Committee, Analytical Studies Branch, Statistics Canada, 24th Floor, R.H. Coats Building, Ottawa, Ontario K1A 0T6. Or phone (613) 951-1804. □



# Key labour and income facts

The following selection of labour and income indicators is drawn from 11 sources and includes published and unpublished annual data. These indicators appear in every issue.

The latest annual figures are always shown; as results become available, the indicators are updated so that every issue contains new data. An indicator updated or revised since the last issue is "flagged" with an asterisk.

## Data sources

The indicators are derived from the following sources:

- |           |  |
|-----------|--|
| 1-14 & 16 | <b>Labour Force Survey</b><br>Frequency: Monthly<br>Contact: Doug Drew (613) 951-4720                          |
| 15        | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211                |
| 17        | <b>Absence from Work Survey</b><br>Frequency: Annual<br>Contact: Nancy Brooks (613) 951-4589                   |
| 18        | <b>National Work Injuries Statistics Program</b><br>Frequency: Annual<br>Contact: Joanne Proulx (613) 951-4040 |
| 19        | <b>Help-wanted Index</b><br>Frequency: Monthly<br>Contact: Adib Farhat (613) 951-4045                          |
| 20-21     | <b>Unemployment Insurance Statistics Program</b><br>Frequency: Monthly<br>Contact: Adib Farhat (613) 951-4045  |
| 22-29     | <b>Survey of Employment, Payrolls and Hours</b><br>Frequency: Monthly<br>Contact: Cindy Ingalls (613) 951-4090 |

- |       |  |
|-------|--|
| 30-32 | <b>Major wage settlements, Bureau of Labour Information (Human Resources Development Canada)</b><br>Frequency: Quarterly<br>Contact: Information (819) 997-3117          |
| 33-35 | <b>Labour income (Revenue Canada, Taxation; Survey of Employment, Payrolls and Hours; and other surveys)</b><br>Frequency: Quarterly<br>Contact: Ed Bunko (613) 951-4048 |
| 36-46 | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211  |
| 47-53 | <b>Household Facilities and Equipment Survey</b><br>Frequency: Annual<br>Contact: Penny Barclay (613) 951-4634   |
| 54-59 | <b>Small area and administrative data</b><br>Frequency: Annual<br>Contact: Customer Services (613) 951-9720  |

Notes and definitions of certain indicators are given at the end of the table.

## Additional data

The table provides, at the most, two years of data for each indicator. A longer time series (generally 10 years) for this set of indicators can be obtained, on paper or diskette, at a cost of \$50. (A more extensive explanation of the indicators is also available.) This 10-year data set is updated quarterly. For information, contact Jeannine Usalcas at (613) 951-6889; fax (613) 951-4179

## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Labour market</b>								
1	Population 15 years and over	'000	1993	22,371	454	102	719	589
			1994	22,717	456	103	725	594
	Change	%		1.5	0.4	1.5	0.9	0.9
2	Labour force	'000	1993	14,663	242	66	431	349
			1994	14,832	244	68	438	351
	Change	%		1.2	1.1	1.8	1.5	0.5
3	Participation rate	%	1993	65.5	53.2	65.3	60.0	59.3
			1994	65.3	53.6	65.5	60.4	59.1
4*	Employed	'000	1993	13,015	193	54	368	305
			1994	13,292	195	56	380	307
	Change	%		2.1	0.7	3.1	3.1	0.7
	- employed full-time	'000	1993	10,772	166	45	303	257
			1994	11,038	168	47	309	259
	Change	%		2.5	1.5	4.3	2.1	0.9
5	Proportion of employed working part time	%	1993	17.2	14.2	17.3	17.8	15.9
			1994	17.0	13.5	16.3	18.6	15.6
6	Proportion of part-timers wanting full-time work	%	1993	35.7	63.7	--	47.9	50.5
			1994	35.2	59.6	--	46.0	48.5
7	Unemployed	'000	1993	1,649	49	12	63	44
			1994	1,541	50	12	58	44
	Change	%		-6.6	2.5	-4.1	-7.8	-0.4
8	Official unemployment rate	%	1993	11.2	20.1	18.1	14.7	12.6
			1994	10.4	20.4	17.1	13.3	12.4
<b>Alternative measures of unemployment</b>								
9	Unemployed 14 or more weeks as a proportion of the labour force	%	1993	5.6	10.7	7.8	7.0	5.4
			1994	5.1	11.5	7.0	6.0	5.1
10	Unemployment rate:							
	- of persons heading families with children under age 16	%	1993	9.5	19.1	17.9	12.5	11.4
			1994	9.0	19.4	16.1	12.0	11.3
	- excluding full-time students	%	1993	10.9	20.0	18.0	14.3	12.3
			1994	10.1	20.5	17.5	13.1	12.3
	- including full-time members of the Canadian Armed Forces	%	1993	11.1	20.1	17.7	14.2	12.4
			1994	10.3	20.5	17.0	12.9	12.3
	- of the full-time labour force	%	1993	13.9	24.0	21.6	18.3	16.1
			1994	13.0	24.0	20.7	17.1	15.9
	- of the part-time labour force	%	1993	14.4	21.5	13.0	18.0	15.7
			1994	13.3	20.1	11.7	16.4	14.4
	- including discouraged workers and others on the margins of the labour force	%	1993	12.0	24.4	18.9	15.6	14.2
			1994	11.0	24.5	17.7	14.5	13.9
11	Underutilization rate based on hours lost through unemployment and underemployment	%	1993	14.6	24.8	22.3	19.1	17.3
			1994	13.7	24.6	21.5	18.0	17.1
12	Proportion unemployed six months or longer	%	1993	30.8	33.3	--	26.9	23.6
			1994	30.2	36.1	--	25.6	24.2

See Notes and definitions at end of table.



# Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
5,692	8,447	840	740	2,007	2,782	..	..	1993	'000	1
5,753	8,588	845	745	2,039	2,869	..	..	1994		
1.1	1.7	0.6	0.7	1.6	3.1	..	..		%	
3,546	5,692	561	494	1,436	1,845	..	..	1993	'000	2
3,595	5,707	563	491	1,463	1,913	..	..	1994		
1.4	0.3	0.4	-0.6	1.9	3.7	..	..		%	
62.3	67.4	66.8	66.8	71.5	66.3	..	..	1993	%	3
62.5	66.5	66.6	65.9	71.8	66.7	..	..	1994		
3,080	5,089	509	455	1,296	1,666	..	..	1993	'000	4
3,156	5,160	511	457	1,337	1,733	..	..	1994		
2.5	1.4	0.5	0.5	3.1	4.0	..	..		%	
2,595	4,175	410	372	1,077	1,372	..	..	1993	'000	
2,681	4,264	416	376	1,111	1,405	..	..	1994		
3.3	2.1	1.5	1.2	3.2	2.4	..	..		%	
15.7	17.9	19.3	18.3	16.9	17.6	..	..	1993	%	5
15.0	17.4	18.5	17.7	16.9	18.9	..	..	1994		
42.4	31.9	34.5	37.4	32.2	30.4	..	..	1993	%	6
41.0	32.7	34.3	36.6	31.6	29.7	..	..	1994		
467	604	52	40	139	179	..	..	1993	'000	7
438	547	52	34	126	180	..	..	1994		
-6.0	-9.4	-0.6	-13.1	-9.9	0.4	..	..		%	
13.2	10.6	9.3	8.0	9.7	9.7	..	..	1993	%	8
12.2	9.6	9.2	7.0	8.6	9.4	..	..	1994		
7.2	5.5	4.3	3.4	4.1	4.3	..	..	1993	%	9
6.4	5.0	4.1	3.0	3.3	3.9	..	..	1994		
										10
10.3	8.9	7.6	7.0	9.0	8.0	..	..	1993	%	
10.1	8.4	6.8	6.7	7.2	8.4	..	..	1994		
12.8	10.2	8.8	7.8	9.2	9.5	..	..	1993	%	
12.0	9.2	8.6	6.8	8.2	9.1	..	..	1994		
13.0	10.6	9.2	8.0	9.5	9.6	..	..	1993	%	
12.0	9.5	9.0	7.0	8.4	9.3	..	..	1994		
15.8	13.1	12.2	11.3	11.7	12.0	..	..	1993	%	
14.8	12.0	11.7	10.1	10.6	12.0	..	..	1994		
16.8	14.0	12.3	10.9	14.5	12.5	..	..	1993	%	
14.7	13.5	13.4	9.1	12.5	11.3	..	..	1994		
14.6	11.0	9.9	8.5	9.9	10.1	..	..	1993	%	
13.2	10.0	9.5	7.5	8.7	9.6	..	..	1994		
16.4	13.9	13.0	12.2	12.6	12.7	..	..	1993	%	11
15.3	12.8	12.5	10.9	11.5	12.5	..	..	1994		
34.2	33.4	26.8	23.1	24.5	23.9	..	..	1993	%	12
34.2	32.4	26.3	22.5	22.0	23.8	..	..	1994		

See Notes and definitions at end of table.

## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Other labour market indicators</b>								
13	Employment/population ratio for persons aged:							
	- 15 to 24	%	1993 1994	52.3 52.5	31.3 32.4	51.3 53.3	46.9 48.4	47.0 46.0
	- 25 to 64	%	1993 1994	70.4 70.9	53.7 53.3	65.6 66.5	63.5 64.6	64.0 64.1
	- 65 and over	%	1993 1994	6.1 6.4	-- --	-- --	-- 4.4	-- --
14	Employment by major class of worker:							
	- employees	'000	1993 1994	10,958 11,180	165 164	44 46	315 325	267 267
	- self-employed	'000	1993 1994	1,984 2,055	28 30	10 10	52 54	37 40
15	Men working full time, full year	'000	1992 1993	5,091 5,100	65 69	19 19	132 138	118 113
	Women working full time, full year	'000	1992 1993	3,423 3,456	48 49	13 14	96 97	82 75
16	Days lost per full-time worker per year through illness or for personal reasons	days	1993 1994	9.2 9.1	9.5 9.2	-- --	9.7 9.4	8.4 8.6
17	Proportion of paid workers absent two or more consecutive weeks because of illness or accident	%	1992 1993	5.6 5.8	4.1 4.8	4.0 4.6	5.4 6.1	6.0 5.5
18	Workers receiving Workers' Compensation for time-loss injuries	'000	1992 1993	456 423	8 6	2 2	12 13	10 6
	Change	%		-7.1	-21.5	-4.7	9.4	-43.6
19	Help-wanted index (1991=100)		1993 1994	87 97	82 90	117 113	88 95	89 99
<b>Unemployment insurance</b>								
20*	Total beneficiaries	'000	1993 1994	1,292 1,115	71 60	16 14	63 59	65 61
	Change	%		-13.7	-14.7	-9.9	-6.0	-6.6
21*	Regular beneficiaries without reported earnings	'000	1993 1994	931 773	56 45	11 10	44 41	49 45
	Change	%		-17.0	-18.5	-10.9	-7.2	-7.7
<b>Earnings (including overtime) and hours</b>								
22*	Average weekly earnings in current dollars	\$	1993 1994	556.27 566.87	524.86 530.23	453.91 454.02	493.95 496.07	502.91 501.70
	Change	%		1.9	1.0	-	0.4	-0.2
23*	Average weekly earnings in 1986 dollars	\$	1993 1994	426.58 433.72	422.93 421.82	351.05 351.95	388.94 386.04	397.24 394.11
	Change	%		1.7	-0.3	0.3	-0.7	-0.8
24*	Average weekly earnings of salaried employees in current dollars	\$	1993 1994	702.65 717.78	638.51 635.39	608.29 614.06	620.10 633.01	636.25 644.18
	Change	%		2.2	-0.5	0.9	2.1	1.2
25*	Average weekly earnings of salaried employees in 1986 dollars	\$	1993 1994	538.84 549.18	514.51 505.48	470.45 476.01	488.26 492.61	502.57 506.03
	Change	%		1.9	-1.8	1.2	0.9	0.7

See Notes and definitions at end of table.



## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
										13
47.0	53.9	58.5	55.6	58.4	57.8	..	..	1993	%	
48.4	52.9	59.1	55.6	59.7	57.7	..	..	1994		
65.4	72.9	74.7	76.8	75.3	72.6	..	..	1993	%	
66.4	72.9	74.5	76.9	76.7	73.0	..	..	1994		
4.1	6.9	7.8	13.1	9.1	5.1	..	..	1993	%	
4.0	7.3	7.6	12.3	8.5	6.5	..	..	1994		
										14
2,638	4,353	420	340	1,050	1,365	..	..	1993	'000	
2,711	4,397	425	343	1,079	1,424	..	..	1994		
427	711	84	106	234	295	..	..	1993	'000	
433	747	82	106	250	304	..	..	1994		
1,237	1,999	199	187	510	624	..	..	1992	'000	15
1,226	1,973	214	185	524	641	..	..	1993		
825	1,393	133	108	325	401	..	..	1992	'000	
835	1,363	130	108	331	453	..	..	1993		
10.2	8.9	9.6	8.5	8.0	9.2	..	..	1993	days	16
9.9	8.7	8.5	8.1	7.4	10.5	..	..	1994		
5.9	5.2	7.8	3.8	5.9	5.8	..	..	1992	%	17
6.3	5.5	5.5	4.3	4.5	7.1	..	..	1993		
146	137	17	12	32	78	--	1	1992	'000	18
135	125	15	12	30	77	--	1	1993		
-7.5	-8.6	-7.3	2.4	-7.8	-1.8	--	9.5		%	
92	86	91	83	80	84	..	..	1993		19
100	101	103	99	89	86	..	..	1994		
404	365	37	29	90	146	2	2	1993	'000	20
356	299	32	24	79	125	2	2	1994		
-12.0	-17.8	-15.5	-16.9	-12.6	-14.1	-20.7	-16.4		%	
302	257	24	20	63	101	2	2	1993	'000	21
258	199	20	16	53	84	1	1	1994		
-14.4	-22.8	-18.6	-20.9	-16.8	-17.0	-23.8	-17.8		%	
538.46	588.71	491.80	472.38	551.89	557.26	679.67	705.54	1993	\$	22
543.08	604.54	499.20	485.17	552.58	577.27	687.26	703.52	1994		
0.9	2.7	1.5	2.7	0.1	3.6	1.1	-0.3		%	
412.62	448.71	377.72	361.15	431.50	423.45	..	..	1993	\$	23
421.97	460.42	378.18	364.24	426.04	430.16	..	..	1994		
2.3	2.6	0.1	0.9	-1.3	1.6	..	..		%	
657.83	751.30	640.01	622.20	714.35	701.34	845.42	822.53	1993	\$	24
666.14	770.38	653.55	647.46	721.59	720.58	845.78	816.29	1994		
1.3	2.5	2.1	4.1	1.0	2.7	-	-0.8		%	
504.08	572.64	491.56	475.68	558.53	532.94	..	..	1993	\$	25
517.59	586.74	495.11	486.08	556.35	536.94	..	..	1994		
2.7	2.5	0.7	2.2	-0.4	0.8	..	..		%	

See Notes and definitions at end of table.

## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
26*	Average weekly earnings of hourly paid employees in current dollars	\$	1993	426.05	405.39	296.10	380.70	404.03
	Change	%	1994	437.23	425.50	299.48	378.25	399.91
				2.6	5.0	1.1	-0.6	-1.0
27*	Average weekly earnings of hourly paid employees in 1986 dollars	\$	1993	326.72	326.67	229.01	299.76	319.14
	Change	%	1994	334.53	338.51	232.16	294.36	314.14
				2.4	3.6	1.4	-1.8	-1.6
28*	Average weekly hours of hourly paid employees	hrs	1993	30.6	33.9	30.5	31.7	33.4
			1994	30.9	33.8	30.8	32.1	33.6
29*	Average weekly overtime hours of hourly paid employees	hrs	1993	0.9	1.0	0.4	0.6	0.7
			1994	1.0	1.3	0.3	0.6	0.7
<b>Major wage settlements</b>								
30	Number of agreements		1993	512	15	3	11	3
			1994	407	9	6	14	16
31	Number of employees	'000	1993	1,418	37	6	19	3
			1994	906	28	8	25	28
32	Effective wage increase in base rates	%	1993	0.6	0.1	-	5.1	2.8
			1994	0.3	-	-4.1	-0.5	1.0
<b>Labour income</b>								
33*	Labour income in current dollars	\$ million	1993	393.9	5.1	1.3	9.7	7.9
	Change	%	1994	406.2	5.3	1.3	9.9	8.0
				3.1	3.2	2.6	2.4	1.1
34*	Labour income per employee in current dollars	\$	1993	35,000	30,700	27,600	30,600	29,200
	Change	%	1994	35,400	32,000	27,600	30,100	29,400
				1.2	4.2	-0.3	-1.4	1.0
35*	Labour income per employee in 1986 dollars	\$	1993	26,800	24,800	21,400	24,100	23,000
	Change	%	1994	27,100	25,500	21,400	23,500	23,100
				1.0	2.9	-0.1	-2.6	0.4
36	Net income from self-employment as a proportion of money income	%	1992	5.1	3.4	6.4	3.6	4.2
			1993	5.2	4.4	7.5	4.4	4.0
<b>Earnings of full-time, full-year workers</b>								
37	Average earnings of men working full time, full year	\$	1992	39,500	36,200	32,600	37,600	35,200
	Change	%	1993	39,400	34,700	31,300	38,600	36,800
				-0.1	-4.2	-3.9	2.5	4.6
38	Average earnings of women working full time, full year	\$	1992	28,400	25,200	26,100	24,900	24,700
	Change	%	1993	28,400	24,200	26,100	24,800	22,700
				0.1	-3.9	0.2	-	-8.0
39	Ratio of female-to-male earnings	%	1992	71.8	69.7	80.1	66.0	70.2
			1993	72.0	69.9	83.5	64.4	61.7
<b>Family income</b>								
40	Average family income	\$	1992	53,700	42,100	44,400	46,900	46,500
			1993	53,500	43,000	43,800	46,900	46,900
41	Median family income	\$	1992	47,700	36,800	39,400	40,500	41,700
			1993	47,100	37,700	38,100	41,200	42,200
42	Average income of unattached individuals	\$	1992	23,200	19,600	18,800	18,800	19,000
			1993	23,300	17,100	18,200	20,800	19,300
43	Median income of unattached individuals	\$	1992	17,600	13,900	14,400	13,100	14,300
			1993	17,400	12,400	13,800	16,200	14,200

See Notes and definitions at end of table.



## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
430.71	441.99	369.23	334.57	398.28	442.47	472.15	556.82	1993	\$	26
436.47	458.36	377.62	353.39	400.12	462.15	511.58	575.51	1994		
1.3	3.7	2.3	5.6	0.5	4.4	8.4	3.4		%	
330.04	336.88	283.59	255.78	311.40	336.22	..	..	1993	\$	27
339.14	349.09	286.07	265.31	308.50	344.38	..	..	1994		
2.8	3.6	0.9	3.7	-0.9	2.4	..	..		%	
31.5	30.7	29.7	27.9	29.7	29.0	30.5	32.0	1993	hrs	28
31.6	31.1	30.4	28.8	30.1	29.4	32.2	33.0	1994		
0.8	1.0	0.7	0.7	1.3	0.8	1.7	2.6	1993	hrs	29
0.8	1.2	0.8	0.8	1.4	0.8	1.8	2.4	1994		
119	153	18	14	56	48	..	..	1993		30
32	138	11	11	60	42	..	..	1994		
542	246	41	41	102	103	..	..	1993	'000	31
65	238	11	20	108	96	..	..	1994		
0.1	1.3	0.9	1.1	0.3	2.3	..	..	1993	%	32
1.4	0.3	1.7	1.0	-1.6	1.6	..	..	1994		
90.9	164.6	12.9	9.9	38.7	50.6	0.5	1.3	1993	\$ million	33
93.0	168.9	13.4	10.1	40.3	53.7	0.5	1.3	1994		
2.3	2.6	3.4	2.5	4.0	6.0	3.6	5.2		%	
33,400	37,000	30,400	28,600	35,100	35,600	..	..	1993	\$	34
33,400	37,600	31,100	28,900	35,600	36,200	..	..	1994		
-0.2	1.7	2.2	1.1	1.5	1.8	..	..		%	
25,600	28,200	23,400	21,900	27,400	27,000	..	..	1993	\$	35
25,900	28,600	23,600	21,700	27,500	27,000	..	..	1994		
1.2	1.7	0.8	-0.7	0.1	-0.1	..	..		%	
4.2	5.2	6.6	8.7	4.3	6.3	..	..	1992	%	36
3.8	5.2	6.8	9.3	6.8	5.6	..	..	1993		
37,300	42,200	34,900	32,700	38,700	40,900	..	..	1992	\$	37
36,100	42,200	33,800	32,100	39,600	42,500	..	..	1993		
-3.3	0.1	-3.0	-2.0	2.3	4.0	..	..		%	
27,600	30,400	24,500	23,100	27,200	28,600	..	..	1992	\$	38
26,600	31,100	25,400	24,400	27,300	28,500	..	..	1993		
-3.5	2.3	3.8	5.6	0.3	-0.5	..	..		%	
73.9	71.9	70.2	70.6	70.3	70.0	..	..	1992	%	39
73.8	73.5	75.1	76.1	69.0	67.0	..	..	1993		
48,600	58,800	50,300	48,200	54,700	56,400	..	..	1992	\$	40
47,600	58,500	50,200	47,700	56,500	55,800	..	..	1993		
43,800	52,800	43,700	41,300	47,700	50,300	..	..	1992	\$	41
42,600	52,000	44,800	42,300	49,300	49,100	..	..	1993		
21,100	26,300	18,900	20,300	22,900	23,400	..	..	1992	\$	42
20,700	25,700	20,600	21,000	22,600	25,500	..	..	1993		
15,000	20,300	14,600	14,600	17,700	20,600	..	..	1992	\$	43
15,200	20,200	17,200	15,600	17,400	19,100	..	..	1993		

See Notes and definitions at end of table.

## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
44*	Average family taxes	\$	1992 1993	10,300 10,200	6,700 6,900	7,100 6,800	8,500 8,400	7,900 8,000
45*	Average family income after tax	\$	1992 1993	43,400 43,200	35,500 36,100	37,200 37,000	38,400 38,500	38,600 38,900
46	Proportion below the low income cut-offs (1992 base):							
	- families	%	1992 1993	13.3 14.5	18.4 15.8	7.2 7.6	13.8 14.4	11.5 11.5
	- unattached individuals	%	1992 1993	39.7 40.8	44.5 47.9	38.1 40.0	48.5 36.2	40.3 46.3
	- persons (population)	%	1992 1993	16.8 17.9	20.7 17.9	11.4 11.6	17.8 17.2	14.0 14.8
	- children (less than 18 years)	%	1992 1993	18.9 21.3	26.4 21.3	12.3 11.3	20.5 23.0	15.6 17.7
	- elderly (65 years and over)	%	1992 1993	20.6 22.3	21.7 17.8	14.5 13.3	20.0 17.0	13.8 18.1
<b>Households and dwellings</b>								
47	Estimated number of households and dwellings	'000	1993 1994	10,247 10,387	182 183	47 48	336 332	256 255
48	Average household income	\$	1992 1993	46,800 46,600	39,500 40,200	39,400 38,900	40,600 41,700	41,500 41,900
49	Proportion of households with:							
	- VCRs	%	1993 1994	77.3 79.2	76.9 78.1	74.5 77.1	77.7 81.6	78.9 79.6
	- microwaves	%	1993 1994	79.1 81.5	72.0 76.5	76.6 79.2	79.5 83.4	82.0 84.3
	- two or more automobiles	%	1993 1994	23.8 22.0	14.8 10.9	25.6 22.9	19.4 20.2	21.5 20.0
	- vans & trucks	%	1993 1994	28.4 29.9	33.5 37.2	34.0 37.5	27.7 30.4	36.7 37.6
	- air conditioners	%	1993 1994	25.7 26.8	-- --	-- --	3.9 4.5	10.2 8.2
50	Proportion of all dwellings that are owner-occupied	%	1993 1994	64.1 64.4	78.6 79.8	74.5 72.9	72.3 71.4	76.2 78.0
51	Proportion of all owner-occupied dwellings that are mortgage free	%	1993 1994	48.3 50.3	70.6 69.2	54.3 51.4	53.1 54.0	52.8 57.8
52	Dwellings in need of repair as a proportion of all occupied dwellings	%	1993 1994	22.0 26.3	31.3 32.2	25.6 31.3	27.1 33.5	26.1 30.6
53	Median rent-to-income ratio	%	1993 1994	22 24	16 15	20 22	24 23	19 21

See Notes and definitions at end of table.



## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
9,400	11,700	9,100	8,200	10,200	10,900	..	..	1992	\$	44
9,400	11,400	9,100	8,700	10,400	10,700	..	..	1993		
39,200	47,100	41,200	40,000	44,500	45,500	..	..	1992	\$	45
38,200	47,100	41,100	39,000	46,100	45,200	..	..	1993		
										46
14.8	11.1	14.2	13.8	16.2	13.5	..	..	1992	%	
16.8	13.2	14.3	13.5	15.1	13.9	..	..	1993		
48.9	33.6	48.3	38.3	39.8	34.1	..	..	1992	%	
48.7	36.2	42.0	35.0	42.0	37.3	..	..	1993		
18.7	14.0	19.9	18.1	20.2	17.1	..	..	1992	%	
20.8	16.0	19.1	17.4	18.3	18.1	..	..	1993		
18.3	16.2	23.3	22.8	24.2	19.8	..	..	1992	%	
21.0	21.3	25.2	23.1	20.1	21.8	..	..	1993		
28.9	15.9	23.6	12.1	24.0	20.8	..	..	1992	%	
30.0	20.0	23.0	14.5	21.3	20.5	..	..	1993		
2,688	3,765	387	361	923	1,302	..	..	1993	'000	47
2,720	3,820	397	361	928	1,344	..	..	1994		
41,900	51,800	42,500	41,200	48,000	48,000	..	..	1992	\$	48
40,500	51,500	42,800	40,900	49,600	48,500	..	..	1993		
										49
72.6	79.7	75.5	71.7	82.3	78.6	..	..	1993	%	
74.0	82.1	75.1	75.6	83.0	80.6	..	..	1994		
75.9	80.0	79.8	84.8	84.8	78.0	..	..	1993	%	
79.1	81.5	81.4	85.3	86.7	81.1	..	..	1994		
22.7	25.6	22.5	21.3	26.5	22.6	..	..	1993	%	
20.2	24.2	22.1	20.3	23.7	21.3	..	..	1994		
17.3	25.6	35.7	44.3	44.7	39.2	..	..	1993	%	
19.1	26.8	34.0	46.8	48.4	39.5	..	..	1994		
15.3	44.7	45.7	33.8	8.9	9.1	..	..	1993	%	
15.2	48.1	48.1	31.6	8.2	8.6	..	..	1994		
56.4	64.4	69.5	71.7	67.8	66.1	..	..	1993	%	50
57.0	65.1	70.3	72.3	66.4	65.6	..	..	1994		
46.3	46.6	53.9	60.6	45.7	47.1	..	..	1993	%	51
46.5	49.5	54.5	60.9	49.2	49.8	..	..	1994		
20.7	20.9	26.6	23.8	25.7	20.4	..	..	1993	%	52
24.4	26.1	35.0	28.2	28.2	21.9	..	..	1994		
21	23	22	20	23	25	..	..	1993	%	53
23	25	22	20	21	27	..	..	1994		

See Notes and definitions at end of table.

## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Labour force income profile</b>								
54	Income:							
	- number reporting	'000	1992	19,649	394	91	642	525
	- amount	\$ million	1992	486,751	7,442	1,832	13,881	10,715
	- median	\$	1992	18,600	13,800	15,900	16,200	15,200
	- Canadian index (of median income)	%	1992	100.0	74.2	85.5	87.1	81.7
55	Labour force income:							
	- number reporting	'000	1992	14,281	289	69	451	373
	- amount	\$ million	1992	367,898	5,806	1,375	10,280	8,075
56	Employment income:							
	- number reporting	'000	1992	13,928	273	68	438	361
	- amount	\$ million	1992	350,358	4,779	1,175	9,500	7,241
	- median	\$	1992	19,900	10,200	12,000	16,800	14,700
	- Canadian index (of median employment income)	%	1992	100.0	51.3	60.3	84.4	73.9
57	Self-employment income:							
	- number reporting	'000	1992	1,993	32	11	53	36
	- amount	\$ million	1992	21,415	255	106	684	343
58	Unemployment insurance benefits:							
	- number reporting	'000	1992	3,446	150	31	147	143
	- amount	\$ million	1992	17,541	1,027	200	780	834
<b>Economic dependency profile</b>								
59	Transfer payments:							
	- amount	\$ million	1992	90,397	2,223	513	3,266	2,693
	- economic dependency ratio (EDR)		1992	25.80	46.52	43.63	34.38	37.20
	- Canadian index (of EDR)	%	1992	100.0	180.3	169.1	133.3	144.2
	Unemployment Insurance benefits:							
	- amount	\$ million	1992	17,541	1,027	200	780	834
	- contribution to EDR	%	1992	5.01	21.50	17.05	8.21	11.52
	Family Allowance benefits:							
	- amount	\$ million	1992	2,831	64	15	92	77
	- contribution to EDR	%	1992	0.81	1.34	1.24	0.97	1.06
	Federal sales tax credits:							
	- amount	\$ million	1992	2,740	68	15	98	84
	- contribution to EDR	%	1992	0.78	1.43	1.24	1.03	1.16
	Child Tax Credit benefits:							
	- amount	\$ million	1992	2,419	65	14	85	74
	- contribution to EDR	%	1992	0.69	1.37	1.22	0.90	1.02
	Old Age Security benefits:							
	- amount	\$ million	1992	11,807	199	59	402	318
	- contribution to EDR	%	1992	3.37	4.16	5.02	4.23	4.39
	CPP/QPP benefits:							
	- amount	\$ million	1992	15,116	229	63	551	385
	- contribution to EDR	%	1992	4.31	4.78	5.37	5.80	5.31
	Other pension benefits:							
	- amount	\$ million	1992	20,154	257	78	753	483
	- contribution to EDR	%	1992	5.75	5.37	6.62	7.93	6.66
	Non-taxable income/provincial tax credits:							
	- amount	\$ million	1992	17,790	314	69	504	439
	- contribution to EDR	%	1992	5.08	6.57	5.86	5.30	6.07

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
4,972	7,332	788	669	1,765	2,418	19	33	1992	'000	54
112,382	198,714	17,183	14,283	45,555	62,748	558	1,018	1992	\$ million	
17,000	20,700	16,400	15,800	19,300	19,500	24,300	22,000	1992	\$	
91.4	111.3	88.2	84.9	103.8	104.8	130.6	119.4	1992	%	
3,500	5,353	553	486	1,384	1,778	17	29	1992	'000	55
85,877	149,875	12,471	10,075	35,582	47,071	494	915	1992	\$ million	
3,392	5,232	541	478	1,359	1,740	16	28	1992	'000	56
80,457	144,653	11,999	9,689	34,376	45,143	468	879	1992	\$ million	
19,200	22,300	17,600	15,100	19,800	20,500	23,900	23,900	1992	\$	
96.5	112.1	88.4	75.9	99.5	103.0	120.1	120.1	1992	%	
358	722	104	139	254	278	3	2	1992	'000	57
4,413	8,807	855	972	1,799	3,144	20	18	1992	\$ million	
1,037	1,054	114	91	261	407	5	6	1992	'000	58
5,419	5,223	472	386	1,207	1,929	27	36	1992	\$ million	
22,406	35,166	3,502	2,899	6,609	10,957	61	102	1992	\$ million	59
27.85	24.31	29.19	29.92	19.23	24.27	12.98	11.58	1992		
107.9	94.2	113.1	116.0	74.5	94.1	50.3	44.9	1992	%	
5,419	5,223	472	386	1,207	1,929	27	36	1992	\$ million	
6.74	3.61	3.93	3.98	3.51	4.27	5.70	4.10	1992	%	
693	1,015	119	116	295	334	3	9	1992	\$ million	
0.86	0.70	0.99	1.20	0.86	0.74	0.71	1.03	1992	%	
760	925	121	105	240	318	2	4	1992	\$ million	
0.94	0.64	1.01	1.09	0.70	0.70	0.48	0.51	1992	%	
616	784	119	121	255	274	3	9	1992	\$ million	
0.77	0.54	0.99	1.25	0.74	0.61	0.54	0.97	1992	%	
2,868	4,472	569	517	857	1,538	4	5	1992	\$ million	
3.56	3.09	4.74	5.34	2.49	3.41	0.78	0.58	1992	%	
3,499	6,146	637	561	1,092	1,942	6	5	1992	\$ million	
4.35	4.25	5.31	5.79	3.18	4.30	1.26	0.60	1992	%	
4,182	8,594	774	640	1,493	2,886	8	7	1992	\$ million	
5.20	5.94	6.45	6.60	4.34	6.39	1.69	0.82	1992	%	
4,370	8,007	692	452	1,171	1,737	8	26	1992	\$ million	
5.43	5.54	5.77	4.67	3.41	3.85	1.81	2.96	1992	%	

See Notes and definitions at end of table.



## Key labour and income facts

### Notes and definitions

No.		No.	
2	Persons aged 15 and over who are employed or unemployed.	14	Employees work for an employer for remuneration, usually in the form of a wage or salary.
3	The labour force as a proportion of the population aged 15 and over.		Self-employed workers are working owners of incorporated or unincorporated businesses with or without paid help.
4	Full-time employment includes workers who usually work 30 hours or more per week, and those who work less than 30 hours but consider themselves employed full time (for example, airline pilots). Also included are those holding more than one part-time job and whose total number of hours usually worked per week is 30 or more.	30	Data are for agreements involving bargaining units of 500 or more employees. The total includes federal and provincial agreements.
5	Persons who usually work less than 30 hours per week.	33	Labour income comprises gross wages and salaries (including directors' fees, bonuses, commissions, gratuities, taxable allowances and retroactive pay) and supplementary labour income (payments made by employers for the benefit of employees, including contributions to health and welfare schemes, pension plans, Workers' Compensation and Unemployment Insurance).
8	The unemployed as a proportion of the labour force.	34	Labour income per employee is calculated using LFS estimates of paid workers excluding those absent without pay during the entire reference week.
9	This rate and rates shown as Indicators 10 and 11 are described in <i>Perspectives on Labour and Income</i> (Statistics Canada, Catalogue 75-001E) 4, no. 4 (Winter 1992): 35-43.	46	For an explanation of the methodology underlying the low income cut-offs, see <i>Income Distributions by Size in Canada</i> (Statistics Canada, Catalogue 13-207).
10	The full-time labour force includes persons working full time, those working part time involuntarily and unemployed persons seeking full-time work.  The part-time labour force includes persons working part time voluntarily and unemployed persons seeking part-time work.  Discouraged workers and others on the margins of the labour force are persons who have looked for work in the past six months, but not during the reference week because they believed none was available or because they were waiting for recall or for replies from employers.	53	The rent-to-income ratio refers to rent in the reference year divided by income in the previous year.
11	The rate shows hours lost through unemployment (unemployed multiplied by average actual weekly hours) and through underemployment (that is, short-time work schedules and involuntary part-time employment) as a proportion of hours worked plus hours lost.	54-59	Data are derived from tax returns filed in the spring of the year following the reference year. The mailing address at the time of filing determines the province.
13	The number of persons employed in an age group expressed as a percentage of the population for that age group.		Economic dependency ratio:  $\text{EDR} = \frac{\text{Total transfer payments}}{\text{Total employment income}} \times 100$ <p>(Example: An EDR of 25.80 indicates that for each \$100 in employment income earned by Canadians in 1992, an additional \$25.80 of income was received in the form of transfer payments.)</p>

# In the works

*Here are some of the topics to be featured in upcoming issues*

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## ■ Tax assistance for pensions and RRSPs

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This analysis shows how different types of tax-assisted retirement savings plans are integrated and how unused opportunities can be deferred.

## ■ Saving for retirement

---

Retirement savings over the 1991 to 1993 period are analyzed for different types of taxfilers. The article also describes characteristics of individuals who save a great deal, who save limited amounts and who save nothing.

## ■ RRSPs, unused opportunities

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An analysis of the extent to which taxfilers took advantage of their RRSP savings opportunities from 1991 to 1993 and of the unused opportunities that continue to mushroom. The characteristics of taxfilers who contributed regularly, intermittently or not at all are also investigated.

## ■ Men retiring early

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In the past few decades more men have been retiring before the "traditional" age of 65. How are these men doing financially?

## ■ Non-standard work arrangements - an update

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In 1994, the General Social Survey (Cycle 9) collected data on a variety of forms of non-standard work arrangements, updating information gathered in 1989 (Cycle 4). This article uses the two surveys to analyze changes in the extent and distribution of non-standard work.

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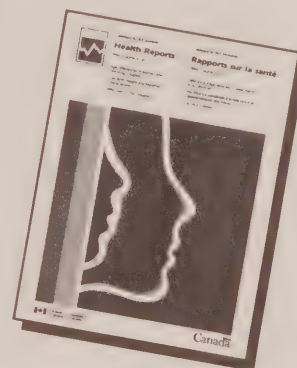
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# PERSPECTIVES

ON LABOUR AND INCOME

Supplement

Catalogue 75-001E

Autumn 1995

## The labour market: Mid-year review

### HIGHLIGHTS

- Economic growth ground to a virtual halt during the first half of 1995 as most economic indicators remained flat, declined or showed feeble growth at best. This performance stands in sharp contrast to that of the first six months of 1994 when the economic recovery had established a strong foothold, and, in general, all sectors of the economy grew.
- Employment growth in the first six months of 1995 - only 25,000 - contrasted greatly with the first half of 1994 when it increased 172,000, averaging about 29,000 per month. However, slowdowns following periods of employment growth are not unprecedented. Similar pauses were experienced in 1986 and in 1989, both followed by resumed employment growth.
- The Canadian employment rate (employment/population ratio) has lagged behind the American since the early 1990s and is now a full four percentage points lower. Between December 1994 and this April, the Canadian employment rate drifted down to 58.7% and has not budged since.
- Public-sector employment dropped 94,000, while self-employment fell by 28,000. These decreases were offset by an increase of 122,000 in the number of private-sector employees.
- In Prince Edward Island and Nova Scotia employment was static for the first six months of 1995. Gains were observed in Quebec, British Columbia, Manitoba, Alberta, and Newfoundland, while employment dropped in Ontario, Saskatchewan, and New Brunswick.

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# The labour market: Mid-year review

Mike Sheridan

Economic growth ground to a virtual halt during the first six months of 1995 as most economic indicators remained flat, declined or showed feeble growth at best. The anemic performance contrasts sharply with the very strong growth of 1994 and its positive spin-offs for the labour market. In 1994, the stage was set by a boom in merchandise exports; GDP (gross domestic product) posted real growth of 1.3% and 1.4% in the first two quarters, and the annual rate was a healthy 4.6%. This year has shown no such vitality in overall growth.

## Lacklustre GDP growth

Real GDP increased only 0.2% in the first quarter of 1995, down sharply from the last quarter of 1994 (1.1%). Slower growth in exports, lacklustre consumer spending, declines in housing starts and a pile-up in inventories all contributed to the overall weak economic performance in the first quarter. By mid-year, few, if any, firm indications of substantial improvement had appeared. On a monthly basis, real GDP by industry was almost unchanged in April (up 0.1%) after declines in February and March. The small increase observed in April came from growth in the mining sector and transportation, communication and other utilities, which offset output declines in manufacturing, wholesale trade and construction.

## American GDP also weak

Canada was not alone in weak economic performance during the first half of the year. The U.S. Commerce Department reported first-quarter GDP growth of 0.7%, more than half the pace of the previous quarter (1.2%) but the weakest U.S. rate since the

This article is based mainly on information from the Labour Force Survey (LFS), available as of July 7th, 1995. All monthly LFS data have been seasonally adjusted to provide a better picture of underlying trends. Seasonal movements are those caused by regular annual events such as climate, holidays, vacation periods, and cycles related to crops and production. Seasonally adjusted series still contain irregular and longer-term cyclical fluctuations.

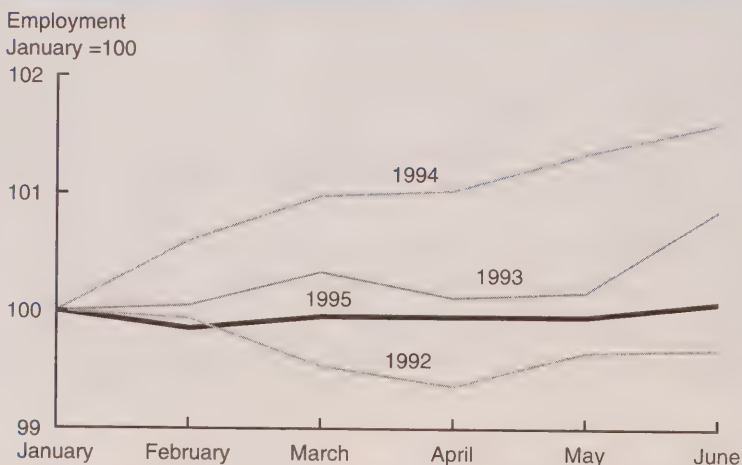
third quarter of 1993. The overall movement in the GDPs of the two countries, while not of the same magnitude, is certainly similar in direction. A continued slow performance by the U.S. economy would inevitably limit growth in Canada.

## Employment flat

From a labour market perspective, the first six months of 1995 stand in sharp contrast to those of 1994 when the economic recovery had established a strong foothold and, in general, all sectors of the economy were seeing marked improvement.

Chart A

**Employment growth virtually halted in the first half of 1995.**



Source: Labour Force Survey

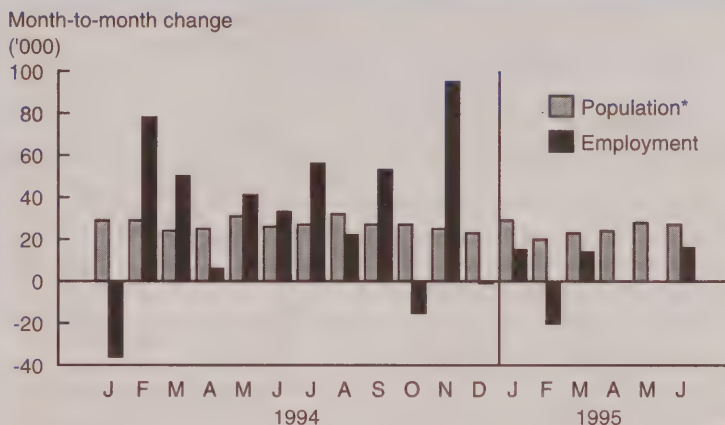
Mike Sheridan is Director of the Household Surveys Division. He can be reached at (613) 951-9480.

Employment jumped 172,000 in the first six months of 1994, averaging about 29,000 per month. That increase was almost seven times greater than the employment growth observed in the first six months of 1995 – only 25,000 – leaving employment levels in June virtually unchanged since January (Chart A).

A comparison of population and employment changes since January 1994 illustrates just how weak the growth has been so far this year (Chart B). Employment growth has not only stalled in 1995, it has failed to keep pace with growth in the working-age population. Average growth in the population aged 15 and over has been about 1.7% (368,000) per year over the last few years. With that growth figure and the current employment rate (employment/population ratio) of 59%, the minimum monthly employment increase required to “stay even” is around 18,000 (217,000 per year). During the first half of 1995 the economy came nowhere close, with employment increases averaging only about 4,000 per month.

Chart B

**Although employment outpaced population growth last year, it fell behind in the first half of 1995.**



Source: Labour Force Survey

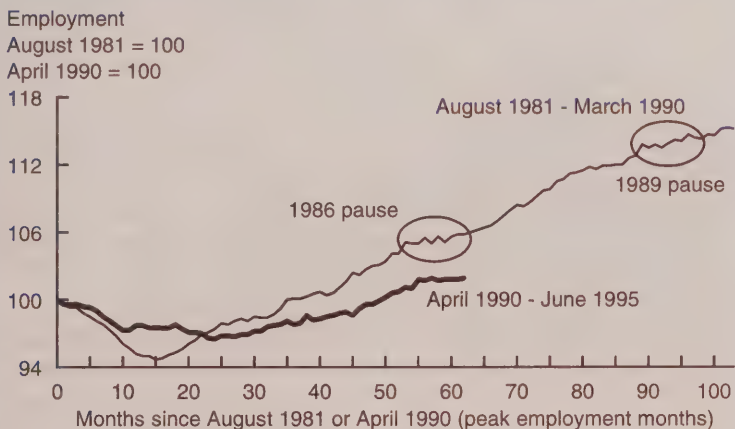
\* Population 15 years and over

### Similar employment slowdowns observed

The lack of growth during the first six months of 1995 is not unprecedented. A similar pause in employment (and to a lesser extent in GDP) was seen during the six-month period between February and July of 1986. That slowdown was followed by almost three years of rather strong employment growth. Another six-month hiatus occurred between February and July of 1989, also followed by a period of moderate job growth prior to the onset of the slump in employment in early 1990 (Chart C).

Chart C

**Pauses in employment growth are not uncommon during an economic recovery.**



Source: Labour Force Survey

### Full-time employment down

Most of the employment growth in 1994 was in full-time work, which is generally viewed as a very positive economic indicator. This represented a significant shift from the two previous years when part-time employment (less than 30 hours per week) considerably outpaced full-time growth. The trend established in 1994 halted abruptly in the first half of 1995 with a decline of 14,000 in full-time

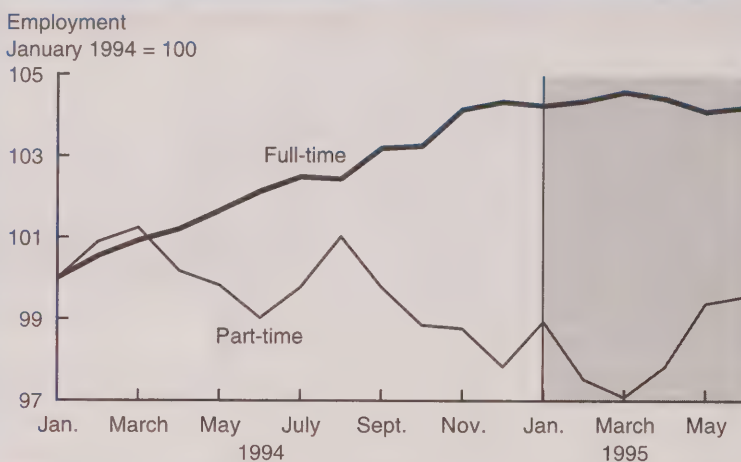
employment (all among women). Part-time employment, viewed less positively than full-time because of its perceived association with lower earnings, fewer benefits and greater job insecurity, increased 39,000 during the same period (Chart D).

### U.S. labour market fares better than Canada's

The Canadian economy, at least in terms of employment generated, has cooled somewhat more than that of the United States. The Canadian employment rate has lagged behind the American<sup>1</sup> since the early 1990s and is now a full four percentage points behind. Unlike the Canadian rate, the U.S. rate had returned to its pre-recession level by late 1994. Between last December and April of this year, the Canadian employment rate drifted down to 58.7% and has not budged since. In contrast, the employment rate in the United States continued to grow, reaching a peak of 63.3% in March before dropping 0.6 of a point in May (Chart E).

Chart D

**Since the end of 1994, full-time employment has hardly changed.**



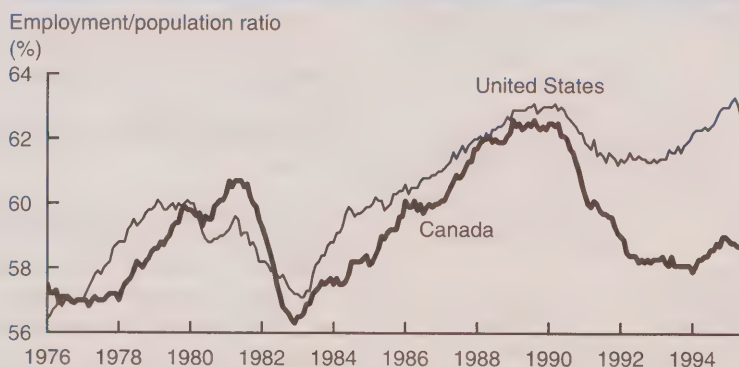
Source: Labour Force Survey

### Participation rates higher in the United States

The participation rate, sometimes viewed as the population's reaction to perceived labour market conditions, has been comparatively weak in Canada. During the late 1970s, Canadians and Americans participated in their respective labour markets at about the same rate. In the 1980s, the Canadian rate tended to be slightly higher. The pattern has recently reversed, with the Canadian participation rate on a downward slope since the start of the 1990 recession; meanwhile, the U.S. rate has resumed its upward climb, following a slight decline in 1990-91 (Chart F). By June 1995, the U.S. participation rate was 66.4%, compared with Canada's 64.9%.

Chart E

**Unlike the United States, Canada has not yet recovered its pre-recession employment rate.**



Sources: Canada, Labour Force Survey; U.S., Current Population Survey

Note: U.S. data cover persons 16 years and over; Canadian data cover those 15 years and over.

As with the employment rate, there has been no movement in the Canadian participation rate since it dropped two-tenths of a point in April of this year, and it remains 2.9 points below the



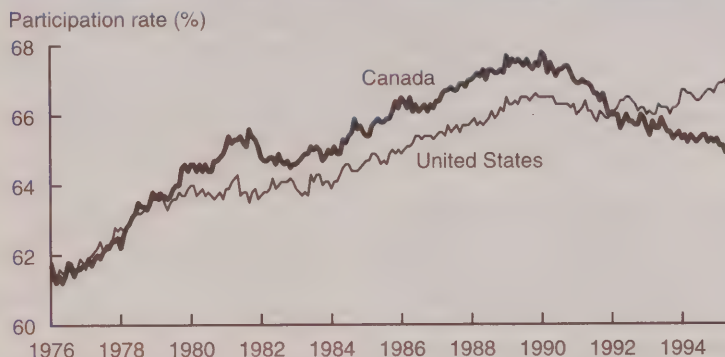
peak reached in January 1990. Despite a falling employment rate, a somewhat depressed participation rate has had a dampening effect on changes in the unemployment rate, which has ranged from a high of 9.7% in January and March to a low of 9.4% in April.

### Consumer purchases decline

Real after-tax average family income for 1993 dropped 2.1% from 1992 (6.6% since 1989). This year's first-quarter real disposable income showed weak growth of 1.1% from the last quarter of 1994. Hence, it is not surprising that personal spending on goods and services hardly grew at all during the first quarter of 1995. Over the first three months of the year retail sales declined, moving up only slightly (0.3%) in April and then (0.6%) in May (Chart G). These figures reflect the Conference Board of Canada's Index of Consumer Attitudes, which fell to an 18-month low of 96.1 (1991=100) in the first quarter, and edged up to 96.5 in the second quarter.

Chart F

### Canadian labour force participation continued to fall in 1995.



Sources: Canada, Labour Force Survey; U.S., Current Population Survey

Note: U.S. data cover persons 16 years and over; Canadian data cover those 15 years and over.

### No help wanted

Further evidence of the overall weakness in the labour market emerges from Statistics Canada's Help-wanted Index, an early indicator of hiring intentions.<sup>2</sup> The index has weakened since March of this year. For the first three months of 1995 the index was stable at 102 (1986=100), then between March and May it declined four points to 98. The June measure remained unchanged, signalling, at least in the very short term, no significant changes in employer demand for labour.

### Young people still staying away from the labour market

The first half of 1995 provided no real evidence of change to established labour market trends for youths. The June unemployment rate is usually influenced by student job seekers, but in 1995 the unemployment rate for persons aged 15 to 24 was 15.2% (compared with 8.5% for those aged 25 and over), lower than the rates for the last two years

Chart G

### With employment and disposable income stagnant, retail sales weakened in 1995.



Source: Monthly Retail Trade Survey

(16.2% in 1994 and a high 18.6% in 1993). These declines in youth unemployment rates have less to do with employment increases than with drops in their labour force participation. Their participation rate fell 7.7 percentage points from an annual average high of 70.6% in 1989 to 62.9% in 1994 and then to a 1995 six-month average of only 62.5%.

### Employment by industry

At the aggregate level, employment showed little movement in either the goods-producing industries or the service sector. Employment in both sectors over the first six months of 1995 was essentially unchanged, with 0.3% growth in services and a decline of 0.7% in goods.

Employment in manufacturing displayed a number of sizeable monthly fluctuations, which left the industry with an increase of 26,000 over the first six months. A small gain in other primary industries boosted employment by 8,000.

Other industries with employment gains included transportation, communication and other utilities, which showed a large gain of 75,000 workers, and finance, insurance and real estate, which grew by 48,000.

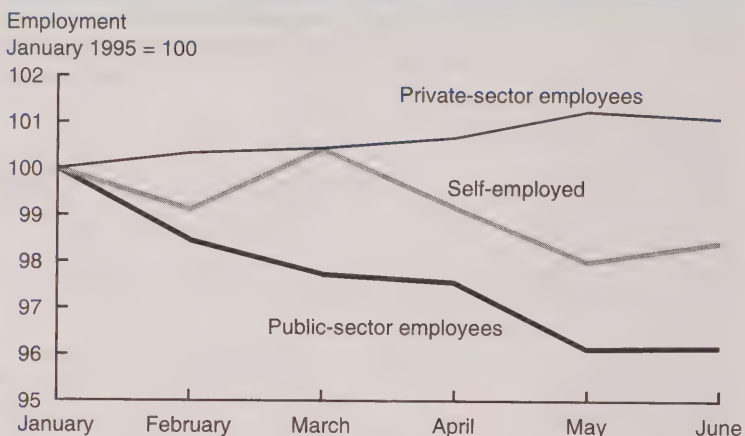
On the loss side, construction declined 44,000. Given the general declines in housing starts and spending on non-residential construction, it is little surprise that employment in this industry had a rough ride over the first six months of the year. Public administration also dropped by 44,000. This is not unexpected given the belt tightening by governments.

By class of worker,<sup>3</sup> the number of public-sector employees dropped 94,000, while self employment fell by 28,000. These decreases were offset by an increase of 122,000 in the number of private-sector employees (Chart H).

Perhaps the most important factor in employment stagnation has been the lack of job creation

Chart H

### Public-sector employment fell sharply in 1995.\*



Source: Labour Force Survey

\* See Note 3 for definitions

in the community, business and personal services industry. During the first half of 1995, employment declined 7,000 in an industry with over 5 million workers. The job loss in this industry contrasts with what appears, in retrospect, to be a hefty increase of 81,000 in the first six months of 1994.

### Provincial trends

In Prince Edward Island and Nova Scotia employment was static for the first six months of 1995. Employment gains were observed in Quebec (21,000), British Columbia (14,000), Manitoba (8,000), Alberta (8,000) and Newfoundland (5,000). In Quebec most of the growth was seen early in the year. The increase in British Columbia reflects a continuation of the slow upward trend in employment for the province. The employment increase in Manitoba was the result of small gains in each of the first six months of 1995.

Employment dropped in Ontario (-21,000) over the first half of 1995. In Saskatchewan employment declined by 8,000 – the result of small employment losses observed in five of the first six months. Employment in New Brunswick also dropped by 8,000 since the beginning of the year, levelling out the 12-month upward trend.

## What lies ahead?

Conjecture and lively debate mark current efforts by economists to predict the direction of the economy and the labour market in the next six to eight months. As with a multi-instalment "soap opera" where only the first few episodes have been seen, "viewers" are urged to "stay tuned." □

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### ■ Notes

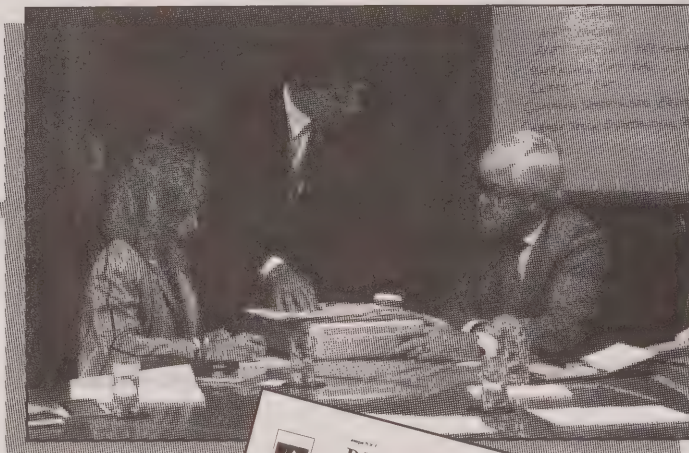
1 The U.S. data used in the estimation of employment rates and labour force participation rates are based on the population aged 16 and over. In Canada, the same estimates are based on the population aged 15 and over.

2 The Help-wanted Index is based on a monthly survey of help-wanted advertisements published in selected metropolitan area newspapers.

3 Public-sector employees are those working for government departments or agencies, crown corporations, or publicly funded schools, hospitals or other institutions; the self employed are working owners of businesses (incorporated or unincorporated), professional practices or farms, and unpaid family workers; and private-sector employees are all other wage and salary earners.



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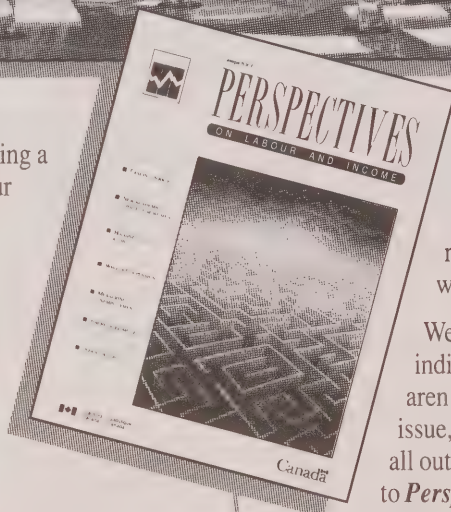
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**WINTER 1995**

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  - WHO IS SAVING?
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## ■ Departments

- 3 Forum
- 5 Highlights
- 43 What's new?
- 48 Index 1989-1995
- 53 Key labour and income facts
- 65 In the works

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## ■ Articles

### 9 Tax assistance for pensions and RRSPs

*Hubert Frenken*

Using the new Revenue Canada RRSP room file, this study shows how current tax-assistance rules apply to members of different retirement plans, how levels of tax-assisted savings can vary widely and how these savings are integrated. It also notes the number of persons falling into the various tax-assistance categories.

### 14 Who's saving for retirement?

*Karen Maser*

Current projections estimate that almost a quarter of the population will be 65 years or older by 2031. Ensuring that this group will have an adequate income has become an important concern. A look at the programs that now exist to help Canadians save for retirement, as well as who participates in them and how much is being saved.

### 20 RRSPs – unused opportunities

*Hubert Frenken*

This article provides previously unavailable information on RRSPs by tracking taxfilers' RRSP participation over a three-year period. It shows who contributed regularly, sporadically or not at all, and explores the extent to which individuals used their RRSP room.



## **Editor-in-Chief**

Ian Macredie  
(613) 951-9456

## **Managing Editor**

Jeffrey Smith  
(613) 951-6894

## **Assistant Managing Editor**

Doreen Duchesne  
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## **Editors**

Susan Crompton  
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## **26 Women as main wage-earners**

*Susan Crompton and Leslie Geran*

One of the most radical changes in Canadian society in the past 30 years has been the growth of dual-earner husband-wife families. Using the most recent data on families with employment income, this article examines couples in which wives earn more than their husbands, to see how they differ from the majority of working husband-wife families (those in which the husband is the main breadwinner).

## **30 Men retiring early: How are they doing?**

*Dave Gower*

During the first half of the century, men generally worked until at least age 65. In the past four decades, however, an increasing proportion have been leaving the workforce before the traditional retirement age. How are these men doing financially?

## **35 Non-standard work on the rise**

*Harvey Krahn*

Although most employed Canadians still work in one full-time, permanent paid job, various forms of "non-standard" work have become more common. In 1994, the General Social Survey collected data on a variety of forms of non-standard work arrangements, updating information gathered in 1989. This study uses data from both years to analyze the growth and changes in the distribution of non-standard work.

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# Forum

## *Letter from the Editor-in-Chief*

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■ Baby boomers are going grey, metaphorically as well as literally. And no wonder: they are besieged by number-crunchers and opinion-makers who warn them that money will be tight when their generation reaches retirement. Policy and program analysts worry that the rapidly growing proportion of people claiming government transfer payments will increase the strain on government revenue; investment counsellors say that people must not only save a large amount for retirement, but begin to do so when still in their twenties.

Knowledge of the retirement income of tomorrow's retirees is urgently required; however, feeding suitable data into the discussion is a challenge. People want more than a map of the present: they want a guide to the future. And that presents statisticians with a real problem. Unlike economists, they are loath to make judgements about the many factors likely to affect social and economic conditions over time. When left with no choice, statisticians will develop projections based on the assumption that the future will look almost exactly like the past. This is very different from making predictions.

Of course, the accuracy of forecasts relies not only on the assumptions made by the analyst, but also on the data available. Simply stated, retirement income amounts to a person's savings at the time of retirement combined with government transfer payments. This concept seems elementary, but actually estimating accumulated savings upon retirement is difficult. To do so, the analyst must answer three questions: How much have people already saved? How much are they currently saving? How much will they save in the future?

Determining how much people have saved is more challenging than it might appear. Sources like the Family Expenditure Survey can provide a time series on the rate at which people were saving when the survey was conducted; however, because it is not a longitudinal survey it provides no data on the amounts already accumulated. Much the same can be said about RRSP savings: while tax data on this year's contributions to RRSPs are useful, they say nothing about accumulated contributions or earned interest (since RRSPs are tax-sheltered). And since people can, and do, withdraw money from their RRSPs before retirement, the net amounts in taxpayers' accounts cannot be determined.

Only wealth surveys can estimate what people have saved to date. These surveys – also called asset and debt surveys, reflecting the close affinity between statisticians and accountants – are difficult to conduct and place a heavy burden on the respondent. Furthermore, many people find some of the most important components of wealth very difficult to evaluate. For example, an employer-sponsored pension plan represents a major saving for retirement, yet very few people know the capitalized value of their plan at any point in time. Estimating the current value of pension plan credits is particularly tricky if a person has worked for several employers and has participated in several plans. Similarly, property such as a home is often the largest single asset owned; yet many people have only an approximate idea of its value on the open market.

It is easier to answer the analyst's second question about retirement income because statisticians know more about people's current saving activities. As shown by the articles in this issue, data on pension adjustments (which reflect both employer and employee contributions to pension plans) provide a better picture of the extent to which people are augmenting future benefits with current contributions. However, data on other forms of saving are not so illuminating. For example, through the Family Expenditure Survey we can identify who owns a home, what the mortgage payments are and the amount of those payments applied against the principal. But data on real property wealth are based on families, while those on pensions are most often based on individuals.

Statisticians part company with more intrepid souls when answering the analyst's third question – how much will people save in the future? Data on accumulated savings and the current rate of saving are estimates at best, whose ambiguities are magnified by the process of predicting future behaviour. This distortion occurs even when the statistician takes the expedient route of mechanically extrapolating forecasts from existing trends.

The analyst's interest in retirement income stems from the desire to assess the probable financial circumstances of future retirees. Since financial circumstances are best measured in terms of family



income, data on individuals should be combined within families. For example, one would expect a dual-earner family that enjoys a relatively high income today to benefit from a relatively high standard of living tomorrow as a dual-pension family. Predicting the economic well-being of retired families therefore requires information about the pension plan participation of both spouses. And while staid statisticians are not in the business of forecasting, they are obliged to keep an eye on the future when collecting data on the present, thereby ensuring that analysts have the best possible information with which to make their predictions.

Ian Macredie  
Editor-in-Chief



**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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# Highlights

## ■ Tax assistance for pensions and RRSPs

... p. 9

- The rules governing tax assistance for retirement savings changed dramatically in 1991. The new legislation sought to provide uniform, comprehensive limits on savings in all tax-assisted, non-government retirement programs: employer-sponsored registered pension plans (RPPs), deferred profit sharing plans (DPSPs) and registered retirement savings plans (RRSPs).
- This article shows how current tax-assistance rules apply to members of different plans, how the levels of tax-assisted savings can vary widely and how these savings are integrated. In addition, it notes the number of persons falling into the various tax-assistance categories.
- The article also provides a conceptual basis for the next two in this issue.

## ■ Who's saving for retirement? ... p. 14

- In any single year from 1991 to 1993, the number of taxfilers aged 25 to 64 who saved through an RPP or an RRSP, or both, changed little (6.9 million on average); they accounted for almost half of all taxfilers.
- Nevertheless, the annual amount saved in RPPs and RRSPs grew from \$27.6 billion in 1991 to \$31.4 billion in 1993, mainly because of the growth in RRSP contributions.
- Because contributions to an RRSP are voluntary and need not be made each year, almost half the participants contributed only one or two of the three years. In contrast, most workers belonging to an RPP participated each year. (RPP membership, when available, is generally compulsory.)
- Over 40% of taxfilers did not participate in either of these programs during the three years. Most of these taxfilers (86%) had earned income at some time during this period so they were eligible to contribute to an RRSP. But their income may have been too low for this to be possible.

- The likelihood of having RPP or RRSP savings increases with income. The proportion of taxfilers saving at least once in the 1991-93 period climbed quickly to exceed 90% for those with annual incomes averaging \$30,000 to \$39,999. It reached almost 100% for those with \$50,000 or more. However, only 31% of taxfilers reported incomes averaging \$30,000 or more.
- Similarly, the proportion saving regularly also climbed with income: almost 88% of those with incomes of \$40,000 or more saved each year from 1991 to 1993.
- Two-thirds of men reported saving at least one year and 47% did all three years. In contrast, women's savings rates were a good deal lower (53% and 36% respectively), largely because women were more likely to have lower incomes.

## ■ RRSPs – unused opportunities ... p. 20

- Since many taxfilers eligible to make contributions do not contribute, or use up only part of their entitlement, and since unused room is carried forward to subsequent years, the total room accessible to taxfilers has been increasing dramatically. By 1994, total RRSP room amounted to \$133 billion.
- RRSP contributions are not significant for taxfilers under 25 and over 64, since relatively few have RRSP room and those who have usually don't participate. Even among those aged 25 to 64 and eligible to contribute, less than 20% did so each year from 1991 to 1993; only 11% used up all of their available room in the third year.
- While 41% of men with RRSP room contributed between 1991 and 1993, 35% of eligible women did so. However, participating women were just as likely as men to contribute to the maximum.
- RRSP participation increases with age (up to 65). Nearly three out of five 45 to 54 year-olds contributed every year and almost half of those between 55 and 64 contributed the maximum allowed.

- Assuming no changes in legislation, current patterns of contribution foreshadow consequences for the RRSP program: as baby boomers begin turning 50 in 1996, participation rates and contributions are likely to surge, possibly diminishing the rate of growth in unused room.

## ■ Women as main wage-earners ... p. 26

- The importance of women as wage-earners has been growing since 1967. The particular trend toward wives being the main breadwinner has become more pronounced in recent years. By 1993, wives were the primary wage-earner in one-quarter of dual-earner families and the breadwinner in one-fifth of single-earner couples.
- The proportion of dual-earner families in which wives outearn husbands has risen from 11% to 25% over the last 26 years. But this growth has been uneven. Between 1967 and 1982, the percentage rose from 11% to 18%. Throughout most of the 1980s, the rate hovered at about 19%. Then, within five years, the proportion of wives with higher earnings than their husbands' jumped six percentage points, from 19% in 1989 to 25% in 1993.
- Primary-earner wives were more likely to be employed in managerial or professional occupations – 48% compared with 35% of primary-earner husbands – but they made almost one-third less than their male counterparts.
- Of those primary-earner wives who were neither managers nor professionals, almost 80% worked in clerical, sales or service jobs, with average earnings ranging from \$24,000 to \$30,000. In contrast, 60% of non-managerial, non-professional primary-earner husbands worked in blue-collar occupations and reported average earnings of \$37,000 to \$40,000.
- Sole-earner wives and their husbands are generally older: 60% of the husbands are 55 or older, as are 43% of the wives. In families where the sole earner is the husband, about half the husbands are between 25 and 44.
- In families where the wife is the primary earner, her employment income (although much lower than a primary-earner husband's) is crucial to the family's economic well-being: in 1993, about 7% fell below the low income cut-offs, whereas almost half of these families would have done so without her earnings.

## ■ Men retiring early: How are they doing?

... p. 30

- During the first half of this century, men generally stayed in the labour force until at least age 65. In the second half, however, more men have been leaving at younger ages. Available data show considerable income disparity between men aged 55 to 64 working full year full time and their retired counterparts: a 1993 median income from all sources of \$38,500 versus \$17,300.
- Some 27% of retired men aged 55 to 64 had incomes between \$1 and \$9,999, compared with only 5% of men of similar age working full year full time. Just 30% of retired men in this age group had incomes of \$25,000 or more, as opposed to 77% of employed men. In higher income brackets, the contrast was even more striking: only 5% of retired men reported 1993 incomes of \$45,000 or more, versus 38% of their counterparts working full year full time.
- Retired men rely heavily on government transfer programs (for example, C/QPP and welfare). Overall, 90% of retired men with income in 1993 received at least some of it from government sources. Such reliance was heavier for retired men with lower income: those with incomes between \$1 and \$9,999 in 1993 obtained 87% of it from government programs, compared with 17% for those with \$25,000 or more.
- Some 86% of the retired men in the \$25,000-and-over bracket received private pensions from a former employer, with a median pension of \$25,600. In contrast, just over half of those in the middle income range (\$10,000 to \$24,999) reported this type of income, with a median pension of \$11,200. Low income retirees (\$1 to \$9,999) seldom had private pensions (8%) and when they did, the amounts were small.
- Four in five families (two or more persons) with retired men aged 55 to 64 had family incomes above the low income cut-off (LICO). In contrast, over half of all unattached individuals (retirees not living with other family members) had incomes below the LICO.

## ■ Non-standard work on the rise ... p. 35

- Non-standard work has become more common in Canada. Although the majority of workers are still



employed in one full-time, permanent paid job, the rates of part-time work, temporary work, own-account self-employment and multiple jobholding all increased between 1989 and 1994.

- From 1976 to 1994, the proportion of workers aged 15 to 64 employed part time climbed significantly, from 11% to 17%. By 1994, about 2 million people were working part time, while almost 11 million were full-time workers. Rising part-time employment was experienced largely by 15 to 24 year-olds. Between 1989 and 1994, part-time rates rose slightly for men (7% to 8%) but declined marginally for women (25% to 24%).
- Multiple jobholding has also become more common, partly because of rising rates of part-time employment. Between 1989 and 1994, the proportion of 15 to 64 year-olds with two or more jobs rose from 5% to 7%. By 1994, about 944,000 working-age Canadians were holding two or more jobs.
- In 1989, 7% of 15 to 64 year-old workers were self-employed on their own account (that is, they had no paid employees). A similar proportion were employers (with one or more paid employees). By 1994, the proportion of employers had declined marginally (to 6%), while that of own-account workers had increased (to 9%), continuing a long-term trend. In 1994, over 1.1 million working-age Canadians were "their own boss," without the additional help of employees.
- In 1989, 799,000 employees (8%) identified themselves as temporary workers. In 1994, almost one million or 9% of all 15 to 64 year-old employees were in temporary or contract positions. Younger employees were more likely than older employees to be in temporary or contract jobs in both 1989 and 1994.

- Population projections are now available for all four federally legislated employment equity target groups, with the release of two reports dealing with visible minorities and persons with disabilities. *Projections of Persons with Disabilities at Work, Canada, Provinces and Territories, 1993-2016* provides estimates by sex and five-year age groups for every year from 1993 to 2016. *Projections of Visible Minority Population Groups for Canada, Provinces/Territories and Regions, 1991 to 2016* presents estimates for eight visible minority groups. Variables include age, sex, provincial distribution, fertility and mortality rates, and immigration and emigration.
- The publication, *Life Tables, Canada and Provinces, 1990-1992*, is now available. The new life tables are based on the 1991 Census population counts and mortality rates prevailing from 1990 to 1992. Several variations of the basic tables are presented.
- The Analytical Studies Branch has released several new studies. *Divergent Inequalities – Theory, Empirical Results and Prescriptions* argues that widely used summary statistical indicators of inequality are potentially misleading, resulting occasionally in conclusions not supported by the evidence. It identifies several major sources of divergence between evidence cited and conclusions claimed.

*Selection versus Evolutionary Adaptation: Learning and Post-entry Performance* examines the maturation process of firms that enter an industry by constructing a new plant.

*The Missing Link – Data on the Demand Side of Labour Markets* discusses the constraints imposed on labour economics by existing data collection methods. The paper suggests types of data that might be collected, and alternative methodologies for an establishment/worker survey; it also discusses some of the theoretical and empirical difficulties that might be encountered in such an exercise.

*Human Capital and the Use of Time* shows that investment in human capital yields several important benefits to society that increase with the level of educational attainment.

- The first full year of labour market and income microdata from the Survey of Labour and Income Dynamics (SLID) will soon be available. The file will provide a vast array of data covering, among

## ■ What's new ?

... p. 43

- The 1996 Census of Population will be held on May 14, 1996. New questions have been added to the long form questionnaire on the main type of transportation used to get to work, and the hours spent in the week preceding the census on unpaid activities such as housework, yard work, home maintenance, child care and elder care. Some data will also be collected to identify members of visible minorities.

other topics, job turnover by industry and occupation, labour market transitions from work to retirement, and the effect of divorce on financial well-being. *Dynamics of Labour and Income: 1994 Report* introduces some of the benchmark data collected during the preliminary SLID interview, and illustrates the scope and level of analysis that this segment of the survey can support.

- SLID respondents now have the option of reporting income through their tax records instead of a telephone interview. *The Use of Tax File Data in the Survey of Labour and Income Dynamics: Summary Report* presents details on this approach to income data collection.

- In November 1995, the Survey of Work Arrangements collected data to measure the prevalence of non-standard work arrangements among Canada's workers. Non-standard work arrangements include compressed/extended work weeks or weekend work, shift or on-call work, flexitime arrangements, home-based work, and temporary work.

## ■ Key labour and income facts ... p. 53

- Small area and administrative data on the "Labour force income profile" (indicators 54 to 58) and the "Economic dependency profile" (indicator 59) have been updated to 1993. □

### **Perspectives on Internet**

*Perspectives on Labour and Income* is now offering its Highlights section, What's new? and Subject index on the Internet.

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# Tax assistance for pensions and RRSPs

Hubert Frenken

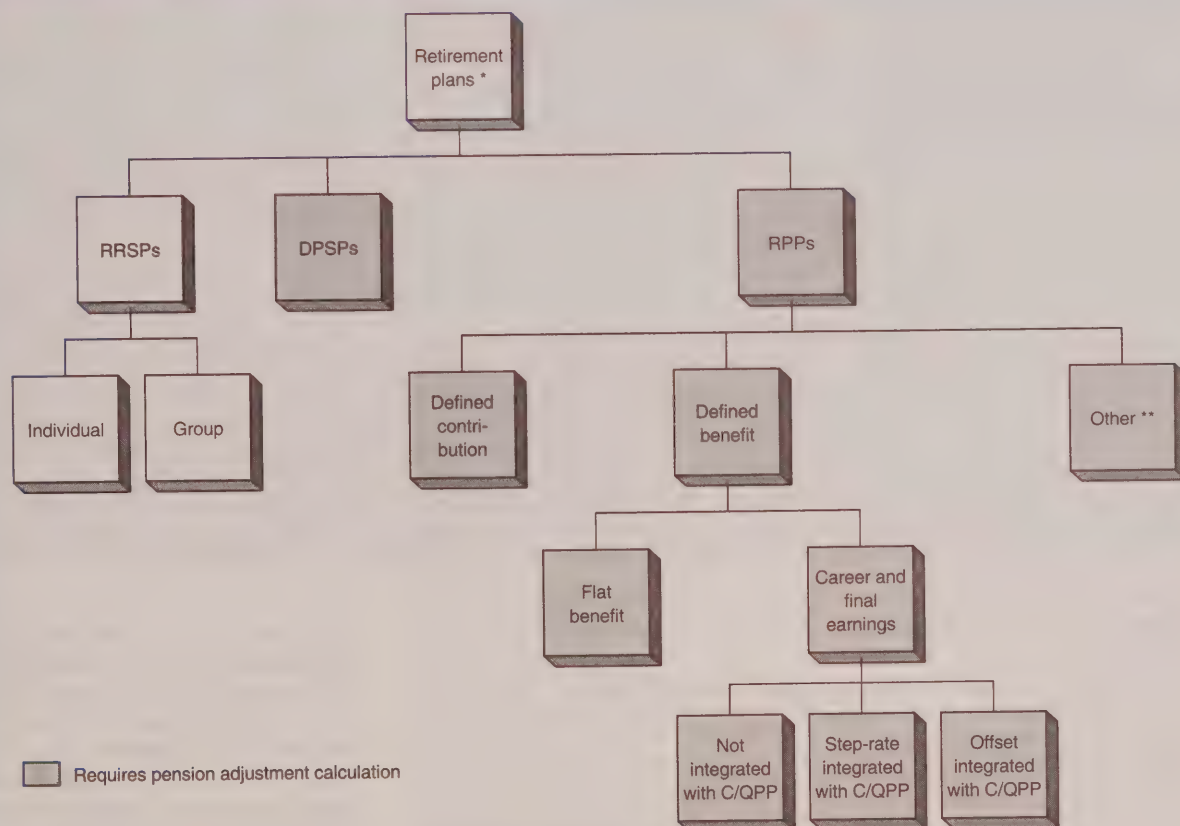
The tax treatment of retirement savings changed dramatically in 1991. "[T]o provide fairer and more flexible limits on tax assistance" (Department of Finance, 1988), new legislation sought to provide uniform, comprehensive limits on savings in all tax-assisted, non-government retirement programs (Figure): employer-sponsored registered pension plans (RPPs), deferred profit sharing

plans (DPSPs) and registered retirement savings plans (RRSPs).

The previous legislation, while stipulating limits on the savings that workers could accumulate in RPPs, DPSPs and RRSPs, made little attempt to harmonize the tax treatment of these plans. It did impose two ceilings for annual RRSP contributions: one for persons who participated in an RPP or DPSP and

one for those who did not. However, it was thought to have "serious inequities ... [leaving] taxpayers at the same income level with quite different opportunities to save for retirement" (Department of Finance, 1989a) because widely varying benefit levels generated by RRSPs, DPSPs and different types of RPPs were largely ignored.

Figure  
Tax-assisted retirement savings programs in Canada



\* See Data source and definitions.

\*\* Combination of defined contribution and defined benefit plans, and other hybrid arrangements.

Hubert Frenken is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-7569.



## Data source and definitions

The Revenue Canada RRSP room file provides data on all taxfilers with 1991, 1992 and/or 1993 tax returns. The 1993 data are preliminary and exclude returns not yet submitted or processed when the file was produced (approximately 1% of all returns).

A 2% sample file was used. Comparisons of selected tabulations with the entire file indicate similar results.

Annual data on each taxfiler include total income, earned income, pension adjustment, past service pension adjustment, RRSP room, and RRSP and employee RPP contributions, as well as age, sex and province or territory of residence.

These data, in conformity with the provisions of the Statistics Act, are available only at the aggregate level in order to ensure confidentiality. This limitation notwithstanding, a wide variety of statistics is available on a cost-recovery basis through Karen Maser, Chief, Pensions Section, Labour Division, Statistics Canada at (613) 951-4033.

**Earned income** is the income qualifying for RRSP purposes: net income from employment (both paid work and self-employment), rental property, alimony and maintenance arrangements and certain disability or loss-of-income plans, less some employment expenses such as union dues and alimony and maintenance payments.

**Pension adjustment (PA)** is a measure of pension credits earned during the year under an RPP or a DPSP, which reduces RRSP room in the sub-

sequent year. It is calculated differently for each type of RPP and for DPSPs. In the companion article, "Who's saving for retirement?" it is used as a proxy for pension savings.<sup>1</sup>

**Past service pension adjustment (PSPA)** measures pension credits accrued through the "buyback" of pensionable service or by retroactive improvements in pension benefits for any period since January 1990. It also reduces RRSP room.<sup>2</sup>

**RRSP room** is the deduction limit or maximum RRSP contribution amount the taxfiler can claim in any year. It is calculated by Revenue Canada based on earned income, PA, PSPA and unused room carried forward.<sup>3</sup>

**Registered retirement savings plans (RRSPs)** are personal savings plans for which contributions are tax-deductible within certain limits and investment income is tax-exempt. Only benefits paid or withdrawals made from these plans are taxable. RRSPs can be individual or group arrangements. Under group RRSPs, a single trust or contract is established on behalf of employees or for members of a professional or trade association and contributions are pooled. Individual RRSP contracts must be registered for each participant, however, and separate accounts must be kept.<sup>4</sup>

**Deferred profit sharing plans (DPSPs)** permit employees to share in company profits. Employer contributions, either a percentage of profits or a fixed dollar amount, are set aside in a fund. A separate account is maintained for each member, credited with investment

income and paid out at the employee's death, retirement or termination.<sup>5</sup>

**Registered pension plans (RPPs)** provide retirement pensions (and often disability and death benefits). They specify an age of eligibility for retirement pensions, including conditions for early retirement. There are two types: defined contribution and defined benefit. The former specifies an employer contribution rate and (if required) employee contributions, but not the benefit formula. The latter defines the amount of benefit the retiring member will receive, but usually not the employer contributions. The employer contributes as needed to ensure that funds meet expected pensions.<sup>6</sup> (A small number of RPPs have combination or hybrid formulas.)

Defined benefit formulas vary considerably. They may be flat benefits, paying a fixed monthly pension not related to earnings; career earnings, providing a percentage of average earnings from all years of plan participation; or final earnings, granting a percentage of the members' earnings during a specified period just before retirement.

Most members of career and final earnings plans have a benefit formula that takes into consideration pensions paid under the Canada and Quebec Pension Plan (C/QPP integration).

For more information on the various plans, on C/QPP integration and on the different rates of accrual of retirement savings, consult Frenken (1995a).

This article shows how current tax-assistance rules apply to members of different plans, how the levels of tax-assisted savings can vary widely and how these savings are integrated. It also notes the number of persons falling into the various tax-assistance categories. Along with the next two articles in this issue it uses data from the new Revenue Canada RRSP room file. For definitions of terms and

concepts common to all three, see *Data source and definitions*.

## New analytic tool

The RRSP room file contains 1991-to-1993 personal income tax information that makes it possible, for the first time, to analyze the extent to which individuals have been saving for their retirement through each of the programs, and which combinations were used over a

three-year period. Previously, participation in each program could be studied only independently, and for just one year at a time. RRSP analysis was limited to defining the characteristics of taxfilers most likely to contribute in a given year. This file, however, permits the description of those who maximize their RRSP opportunities on a regular basis, those who contribute intermittently and those who never participate.

Table 1  
Current schedule of dollar deduction limits for RPPs, DPSPs and RRSPs

	RPPs	DPSPs	RRSPs
		\$	
1995	15,500	7,750	14,500
1996	13,500	6,750	13,500
1997	14,500	7,250	13,500
1998	15,500	7,750	14,500
1999	indexed *	indexed *	15,500
2000	indexed *	indexed *	indexed *

Source: Finance Canada

\* Limits are indexed to changes in average wages and salaries.

The file will be augmented annually, providing a longitudinal database. As more data are added, it will be possible, for example, to evaluate any effect the recession of the early 1990s may have had on RRSP participation and contribution levels.

### New deduction limits

The 1991 legislation set new ceilings for annual savings in RPPs, DPSPs and RRSPs.<sup>7</sup> RPP/DPSP savings are limited to specific dollar amounts (DPSPs at one-half that of RPPs), while RRSP contribution ceilings are either a dollar amount or 18% of earned income, whichever is lower.<sup>8</sup> The RRSP deduction limit still depends on the taxfiler's participation in an RPP or DPSP the previous year. For these participants the RRSP room is reduced by the pension adjustment (PA), a calculated value of the annual pension credits provided by the RPP or DPSP.

### Dollar amounts

The annual dollar limit was initially set at \$11,500 (for RPPs in 1990 and for RRSPs in 1991<sup>9</sup>) and scheduled to increase each year by \$1,000 until reaching \$15,500, before being indexed to average wages and salaries. A pension from contributions at this level over a full career was considered comparable to the maximum benefit from a defined benefit RPP. The original

schedule was changed in the 1992 and 1995 budgets and is currently projected to reach \$15,500 by 1998 for RPPs and 1999 for RRSPs (Table 1).<sup>10</sup>

### Greater flexibility

Taxfilers who do not use their annual RRSP room no longer forfeit the opportunity: since 1991, unused room may simply be carried forward. This provision would permit, for example, a taxfiler with RRSP room of \$10,000 but able to contribute only \$2,000, to have the remaining \$8,000 added to the room available for the next year. The implications of this provision

are significant, because aggregate unused room has been growing at a dramatic rate (see "RRSPs – unused opportunities" in this issue).

### Pension savings

The PA calculation, striving for fairness and seeking to reflect contributions, varies from plan to plan. For members of a DPSP or defined contribution RPP, the PA consists of total employer and employee contributions during the year. For example, a worker earning \$40,000 per year and participating in a typical defined contribution RPP, requiring contributions of 5% of earnings by both employee and employer, would have a PA of \$4,000. A DPSP member whose employer contributed \$2,000 into a profit sharing fund would have a PA of \$2,000.

For defined benefit RPP members, employer contributions cannot be quantified as easily. They may fluctuate from year to year, depending on the financial position of the plan. (In fact, in a specific year the employer may have been excused from contributing altogether, because of a surplus in

Table 2  
Membership\* in RRSPs, DPSPs and different types of RPPs, 1993

	Members
	'000
RRSPs	5,110
DPSPs	350 **
RPPs	5,245
Defined contribution	460
Flat benefit	891
Non-integrated career and final earnings	434
Step-rate integrated career and final earnings	2,510
Offset integrated career and final earnings	791
Other †	159

Sources: RRSP room file, Revenue Canada, and Pension Plans in Canada database

\* See Data source and definitions. Workers may belong to more than one plan during the year.

\*\* DPSP membership is estimated, based on data obtained from Revenue Canada, Registered Plans Division.

† This includes RPPs with different formulas for different categories of members, a combination of formulas, and other hybrid arrangements.



## Some remaining differences

The 1991 legislation made the tax treatment of retirement savings much more equitable, although it did not manage to eliminate all situations that provide advantages for some individuals, largely because of the effect of the PA on RRSP room. Workers with the same earned income, the same PA and the same remaining RRSP room may still accumulate different levels of retirement and supplementary benefits. Some examples of these situations follow.

### Career versus final earnings

Even though pensions based on earnings close to retirement are generally much higher than those using average career earnings, the same pension adjustment calculation is used. (However, some employers with career earnings plans periodically update their earnings base. The number of members affected by these upgrades is not known.<sup>12</sup>)

### Bridging benefits

Many defined benefit RPP beneficiaries are paid a supplementary benefit from the time of retirement until age 65, formerly the earliest age for C/QPP retirement pensions.<sup>13</sup> This supplement or "bridging benefit" is not considered when pension entitlements and PAs are determined. Nearly three-quarters of members of C/QPP integrated plans are able to retire with an unreduced pension plus a supplement before age 65; in most cases the member is paid a full benefit without the C/QPP integration until then (Frenken, 1995a). The PA, however, is based on the benefit payable at age 65, resulting in a relatively lower PA and higher RRSP room.

### Other ancillary benefits

Many defined benefit RPPs provide such supplementary benefits as indexing and survivors' pensions, not included in the calculation of the PAs.<sup>14</sup> In 1993, nearly 2.2 million RPP members had some form of automatic indexing of their future retirement pensions, and for almost 700,000 of these the pensions were to be adjusted annually to the full increase, if any, in the consumer price index (CPI). Furthermore, 1.7 million workers participated in plans that, in addition to their normal retirement pensions, provided survivors' benefits for their spouses.

### Early termination

In a highly mobile labour force, many workers leave pension plans before retirement, often losing significant benefits. With continuous participation the value of RPP benefits earned during any membership period continues to grow to retirement (particularly in a defined benefit RPP).<sup>15</sup> Therefore, these benefits are generally much greater than the compensation provided on early termination, whether they are lump sum returns of contributions or a deferred pension payable at retirement. The pension adjustments charged against the member's RRSP room during the years of participation reflected such projected growth in RPP benefits. Yet no replacement of RRSP room is provided to compensate for the lower benefits. The Canadian Institute of Actuaries has estimated that benefits payable on termination are often worth less than 20% of the RRSP room the worker has forgone by participating in a pension plan (CIA, 1995).<sup>16</sup>

This calculation, which uses the plan's benefit formula, varies for each type of defined benefit RPP. (For information on the role of the formula in calculating annual benefit costs see Revenue Canada, 1993). For a worker earning \$40,000 with a typical flat benefit of \$30 per month for each year of

service, the PA would be \$2,240. A 2% non-integrated career or final earnings formula would produce a PA of \$6,200.<sup>11</sup> For the most part, the more generous the promised pension, the higher the PA. Nevertheless, some inequities still exist (see *Some remaining differences*).

## Varied membership

How many taxfilers participate in each type of retirement plan? While 5.1 million persons contributed to RRSPs in 1993, only about 350,000 participated in a DPSP<sup>17</sup> and 460,000 belonged to a defined contribution RPP (Table 2).

At the same time, over 4.6 million individuals belonged to defined benefit RPPs: nearly 900,000 with a flat benefit formula and 3.7 million with a formula based on earnings (career or final earnings). For most members with an earnings-based formula, benefits were integrated with C/QPP pensions, most frequently using a step-rate benefit formula (Frenken, 1995a).

## Summary

The rules governing tax assistance for retirement savings changed dramatically in 1991. The new legislation levelled the playing field for workers belonging to different types of retirement plans by introducing a pension adjustment (PA) for members of employer-sponsored registered pension plans and deferred profit sharing plans.

PA amounts vary widely, partly because some types of retirement plans tend to produce much higher PAs than others. Although some provisions that affect benefit levels are not considered in PA calculations (in particular, those relating to bridging benefits, indexing and survivors' benefits), generally the greater the accumulation of pension credits, the higher the PA and, as a consequence, the lower the RRSP contribution oppor-

the pension fund.) Therefore, the PA is calculated using the following formula:

*nine times the pension entitlement, less \$1,000,*

where the pension entitlement is a calculated value of pension savings credited to the member during the year.



tunity. Conversely, the sparser the pension savings, the greater the amount of tax assistance available through RRSPs.

The extent to which taxfilers are taking advantage of these opportunities is analyzed in the next two articles in this issue. The first deals with combined pension and RRSP savings and the second looks at the use of available RRSP room.

The authors of this and the following two articles wish to thank Edwin Williams, Programs Officer, Individual Returns and Payments Processing Directorate, Revenue Canada; and Ken Pawulski, Director, Pension Advice Section, Office of the Superintendent of Financial Institutions, for their valuable comments and suggestions.



## ■ Notes

1 The PA is calculated annually by employers and reported by taxfilers on their tax returns. Taxfilers with more than one PA (participation in more than one RPP/DPSP during the year) must report the combined amounts.

2 PSPAs must be reported by employers to Revenue Canada as they occur, resulting in adjustments to the taxfilers' RRSP room.

3 Taxfilers may also transfer certain types of eligible income into RRSPs without incurring a tax liability. From 1989 to 1994, as a transitional measure, taxfilers could roll over up to \$6,000 of periodic payments from RPPs and DPSPs into spousal RRSPs. They may still roll over retiring allowances into their own RRSPs, up to certain limits.

4 Unlike RPPs, group RRSPs do not require employer contributions, although employers may contribute. These contributions are treated as employees' earned income for income tax purposes, however.

The number of group RRSPs and their participants, although not known, has been growing rapidly in recent years. Some employers have established group RRSPs in lieu of RPPs (Frenken and Maser, 1992).

5 Unlike members of RPPs, DPSP participants may receive lump sum distributions from their plans on retirement. (Pension regu-

latory legislation prohibits RPP lump sum payments.) To avoid tax deduction at source, members have the option of transferring the amounts to an RRSP or other registered plan, or purchasing an annuity.

6 Employer contributions to RPPs are not available from these data. Three out of ten RPP members either had plans not requiring personal contributions or elected not to contribute.

7 The opportunity to contribute to a spousal RRSP and yet claim these contributions against the taxfiler's own deduction limit was continued. The definition of spouse was expanded in 1993 to include common-law relationships.

8 The 18% of earnings approximates the amount required to replace pre-retirement earnings for most workers. It corresponds to the maximum benefit obtainable by a member of a defined benefit RPP with a formula of 2% of final earnings for each year of service. After the maximum period of contributory service (35 years), a member would be entitled to 70% of those earnings, "considered to be sufficient to avoid serious disruption of living standards" (Department of Finance, 1989a).

9 Current RRSP room is always dependent on the previous year's earned income, and the pension adjustment used to reduce each year's RRSP room is based on the previous year's RPP/DPSP participation.

10 Average wages and salaries have increased more slowly than expected. The earnings limit to which the 18% rate is applicable is targeted at 2.5 times average wages and salaries, or currently about \$75,000. Eighteen percent of \$75,000 is \$13,500, the RPP ceiling for 1996 and the RRSP contribution limit for 1996 and 1997.

11 C/QPP benefit integration reduces the PA. With a step-rated formula of 1.3% of earnings up to the year's maximum pensionable earnings, and 2% on the balance of earnings, the PA would be just over \$4,000. For an offset formula of 2% of earnings less the full C/QPP pension, the PA would be just under \$4,000. The actual reduction would be one thirty-fifth of the C/QPP pension times the number of years of service. For further information on C/QPP integration see Frenken (1995a).

12 This is one of the reasons for treating career earnings and final earnings plans alike. It also avoids the need for burdensome PSPA calculations (see note 2) with each adjustment that might discourage some employers from making changes and improving members' pensions.

13 Since the mid-1980s C/QPP retirement pensions have been made available as early as age 60, albeit at a reduced level. The RPP

supplementary benefits have not been lifted, however.

14 Many employers sponsoring RPPs with no automatic indexing provide increases in retirement benefits on an ad hoc basis. There are no data on how many pensioners receive such increases each year.

15 These benefits may profit from salary increases, plan improvements and benefit indexing.

16 This issue may be addressed soon, as stated in the 1995 budget: "The government will investigate the possibility of modifying the RRSP limits ... to restore lost RRSP room to employees who leave pension plans before retirement" (Department of Finance, 1995).

17 There are no complete data on the number of workers who participated in DPSPs. This estimate is based on limited data obtained from Revenue Canada.

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# Who's saving for retirement?

Karen Maser

Current projections estimate that almost 23% of the population will be 65 years or older by 2031, up significantly from 12% in the 1991 Census (Desjardins, 1993). Ensuring that this group will have an adequate income has become an important concern, particularly at a time when there is growing pressure on governments to reduce expenditures. This article looks at the programs that now exist to help Canadians save for retirement.

Canada's income support system for seniors has three major components. The first, the Old Age Security/Guaranteed Income Supplement (OAS/GIS) program, provides benefits to all persons – regardless of work history – who meet the age and residency requirements. The other two components, designed primarily for workers, replace income that ceases at retirement. These are the Canada and Quebec Pension Plan (C/QPP), and the combination of employer-sponsored registered pension plans (RPPs), deferred profit sharing plans (DPSPs), and registered retirement savings plans (RRSPs).<sup>1</sup> Virtually all workers in Canada are covered by the C/QPP; however, participation in RPPs<sup>2</sup> and RRSPs is far from universal. RPPs are available at the discretion of the employer and RRSP participation, which is voluntary, is possible only for taxfilers with eligible income. (The plans and terms found in this analysis are explained in the preceding article, "Tax assistance for pensions and RRSPs.")

This analysis, based on all taxfilers aged 25 to 64, differentiates as much as possible between

## What government-administered plans provide

The **Old Age Security (OAS)** pension is a flat rate payable to all persons at age 65 who meet the residency requirements. Although there is no income test, since 1989 OAS payments have been taxed back on a sliding scale if a recipient's net income exceeds a specified level (\$53,215 in 1993). At the beginning of 1993, the OAS provided a monthly pension of \$378.95.

The **Guaranteed Income Supplement (GIS)** is paid to OAS recipients with income below a certain level. The maximum GIS payable to a single person as of January 1993 was \$450.34 monthly. That amount is reduced by \$1 for every \$2 of specified income over and above OAS benefits.

The **Canada and Quebec Pension Plan (C/QPP)** covers almost all workers in Canada. Contributions are based on employment income, within specified limits. For 1993, employee contributions were set at 2.5% of earnings to a maximum contribution of \$752.50 for the year. These contribu-

tions are matched by the employer (for self-employed persons the rate and maximum contribution are doubled). Basic C/QPP benefits begin at age 65 but can be paid as early as 60 or be delayed as late as 70, with an adjustment in the monthly amount received. The benefit is approximately 25% of the contributor's average adjusted earnings up to a maximum that approximates the average wage. In 1993, this maximum level was \$33,400, providing a maximum monthly benefit of \$667.36 for those who contributed the required number of years.

Shown below are approximate annual amounts (based on rates in January 1993) that a single person aged 65 could expect to receive from these public programs, given different levels of pre-retirement employment income. These amounts assume the individual has no other income, meets the necessary residency requirements for full OAS benefits and has contributed the required time to the C/QPP.

	Income from government-administered plans (GAP)				Percentage of employment income replaced by GAP
	OAS	GIS	C/QPP	Total	
	\$				%
Employment income prior to retirement					
\$0	4,547	5,404	-	9,951	...
\$5,000	4,547	4,779	1,250	10,576	212
\$10,000	4,547	4,154	2,500	11,201	112
\$15,000	4,547	3,529	3,750	11,826	79
\$20,000	4,547	2,904	5,000	12,451	62
\$25,000	4,547	2,279	6,250	13,076	52
\$30,000	4,547	1,654	7,500	13,701	46

Note: Prior to age 65, persons with very low employment income could also be receiving social assistance benefits. This would lower the total income replacement rate.

Karen Maser is with the Labour Division. She can be reached at (613) 951-4033.



## Data source

This analysis used information from the Revenue Canada RRSP room file. (For a description of this file, see "Tax assistance for pensions and RRSPs" in this issue.)

A 2% sample file was used. Comparisons of selected tabulations with the entire file indicate similar results.

This study is restricted to taxfilers aged 25 to 64. Including those younger and older can distort the picture, as many under 25 have not yet entered the labour force or are fairly recent entrants, and many over 64 have already retired. Only those who filed a tax return in each of the three years (1991 to 1993) were included.

When all three years were considered as one unit, total income was averaged over the three years and the taxfiler's age assigned was that at the end of 1992.

Only "normal" RRSP contributions (that is, those subject to the standard deduction limits) were considered; transfers of pension income to spousal RRSPs and rollovers of retiring allowances to RRSPs were excluded. Also, withdrawals from RRSPs were not considered.

In calculating RRSP contribution room for one year, Revenue Canada uses the pension adjustment (PA) from the previous year. For this analysis, however, RRSP contributions were matched with PAs from the same year to provide a more accurate picture of the "savings" taking place in any one year.

Past service pension adjustments (PSPAs) were not considered, because they relate to RPP membership in previous years. For 1993, the PSPAs in total were less than 1% of the PAs.

These data have resulted from changes to the Income Tax Act effective in 1991 that require the calculation of a pension adjustment (PA) for each employee belonging to an RPP. The PA is a measure of the cost of the pension accrued by the member for the year and can be used as a proxy for RPP savings, similar to RRSP contributions.<sup>4</sup> It identifies all RPP members (not just those who contribute to their plan) and can be combined with information on RRSP contributors to determine the extent to which Canadians are participating in at least one of these programs.

Using the new longitudinal file, this article identifies those who participated in RPPs or RRSPs, as well as those who did not, from 1991 to 1993. It also examines the growth in the amount saved over that three-year period, and the per-

those who are eligible to participate in RPPs and RRSPs and those who are not.<sup>3</sup> Although these plans form the focus of this article, the role of OAS/GIS and C/QPP in providing a source of income is also discussed (see *What government-administered plans provide*).

## New data source helps

Prior to 1991, it was not possible to estimate from personal income tax data how many Canadians saved – and how much – through the combination of RPPs and RRSPs. Only RRSP savings could be measured. There were no data on persons not required to contribute to their RPP (over one-quarter of all members) and no estimate of the amount saved in RPPs through employer contributions. Furthermore, information was available for one year only. Longitudinal data recently available from Revenue Canada (see *Data source*) for the years 1991 to 1993 provide a much better picture of who is saving for retirement through these programs.

Table 1  
Taxfilers aged 25-64 with RPP participation (PA) \* and/or RRSP contributions

	1991	1992	1993 **	Change	
				1991-92	1992-93
	millions			%	
Number of taxfilers	14.0	14.2	14.0	1.7	-1.4
With PA and/or RRSP	6.8	6.9	6.9	1.9	-0.4
With PA	4.7	4.7	4.5	0.1	-3.0
With RRSP	4.2	4.4	4.6	3.9	4.3
	\$ billions			%	
Total income of taxfilers with PA and/or RRSP	284.0	294.9	297.0	3.8	0.7
PA plus RRSP	27.6	29.6	31.4	7.3	5.9
PA	16.0	16.8	16.6	5.2	-0.9
RRSP	11.7	12.9	14.7	10.2	14.8
	\$			%	
Average PA and RRSP combined	4,049	4,306	4,580	6.3	6.4
	% of total income				
PA plus RRSP	9.7	10.0	10.6		
PA	5.6	5.7	5.6		
RRSP	4.1	4.4	5.0		

Source: RRSP room file

\* Persons working for an employer providing a pension plan during the year in question.

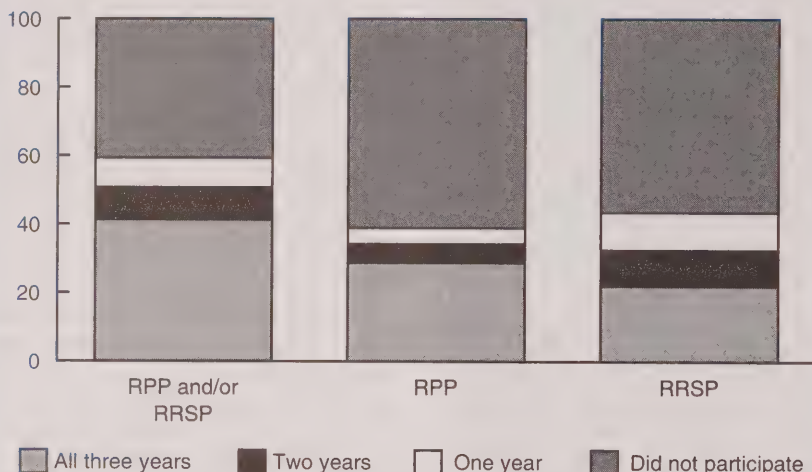
\*\* 1993 data are preliminary and exclude late filers.



Chart A

**From 1991 to 1993, over 40% of taxfilers participated in at least one plan each year.**

% of taxfilers



Source: RRSP room file

### RPP members differ from RRSP contributors

Because contributions to an RRSP are voluntary and need not be made each year, almost half the participants from 1991 to 1993 contributed only one or two of the three years. (An analysis of those contributing to RRSPs in one or more of these three years appears in the companion article in this issue, "RRSPs – unused opportunities.") In contrast, most workers belonging to an RPP participated each year (Chart A). RPP membership is generally compulsory; only if a plan terminates or a worker leaves an employer does RPP coverage with that employer cease.

Another important difference between the two programs is found among the low and high income groups, where the proportion of persons belonging to RPPs is considerably lower than the proportion with RRSP contributions (Chart B). There are several reasons for this.

centage of total income accumulated in these programs.

### Who's saving, who's not?

In any single year from 1991 to 1993, one-third of taxfilers participated in RPPs and about as many contributed to RRSPs (Table 1). The number who saved through one or both of these programs changed little over these years (6.9 million on average) and accounted for almost half of all taxfilers.<sup>5</sup>

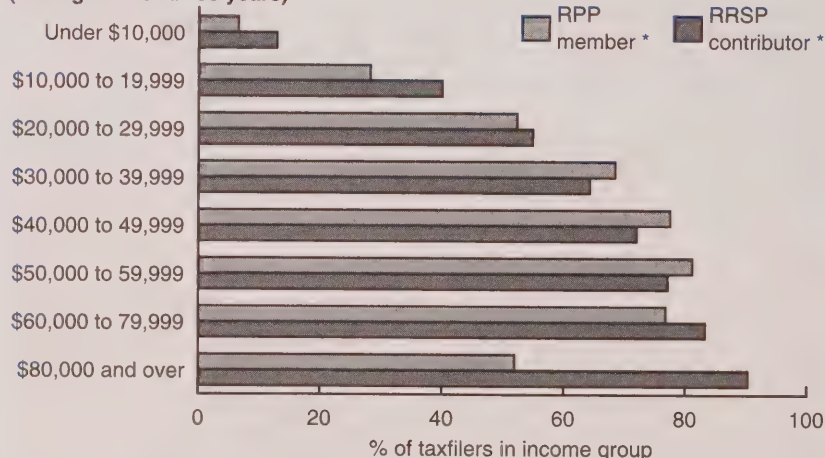
Does this picture change if savings are considered over the entire period, rather than for each year independently? The numbers increase, but not dramatically. Close to 60% of taxfilers saved through either an RPP or an RRSP, or both, in at least one year of the three. Over 40% saved all three years (Chart A).

Chart B

**RPP participation is highest for those with incomes between \$30,000 and \$79,999.**

Total income

(averaged over three years)



Source: RRSP room file

\* At least once from 1991 to 1993.

Many of those in the lower income groups are not employed in situations that offer an RPP, while a number of high income earners are self-employed and so cannot belong to an RPP. Some high income earners may opt to contribute to an RRSP rather than an RPP, to exercise more direct control over the investment and use of their savings.

### Who's saving?

The likelihood of having RPP or RRSP savings increases with income. The proportion of taxfilers saving at least once in the 1991-93 period climbed quickly to exceed 90% for those with annual incomes<sup>6</sup> averaging \$30,000 to \$39,999 over the period. It reached almost 100% for those in the highest income groups (Chart C). However, only 31% of taxfilers reported incomes averaging \$30,000 or more. The proportion saving regularly also climbed with income: almost 88% of those with incomes of \$40,000

or more saved each year from 1991 to 1993.

Age is a factor only to the extent that income increases with age. A 30 year-old with an income of \$45,000 is almost as likely as a 50 year-old with the same income to be saving for retirement.<sup>7</sup>

Overall, 66% of men reported saving at least once and 47% did all three years. For women the comparable proportions were a good deal lower at 53% and 36%, probably because they were more likely to have lower incomes (43% had incomes below \$10,000, compared with one-quarter of the men). Among taxfilers with incomes of \$10,000 or more, women were more likely than men to participate in one or both of the major retirement income programs.

### Who's not saving?

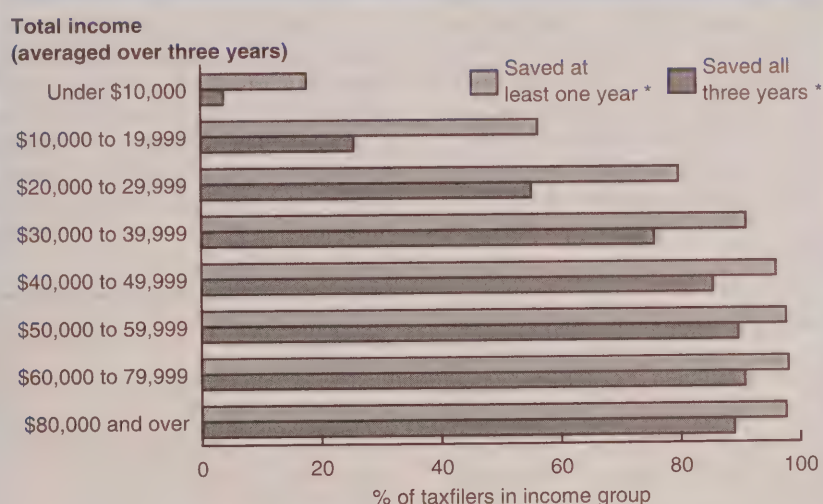
Over 40% of taxfilers did not participate in either of these programs during the three years. Most of

these taxfilers (86%) had earned income at some time during this period so they were eligible to contribute to an RRSP. But their income may have been too low for this to be possible. Certain groups were less likely than others to have earned income; this was true, for example, for 38% of tax-filing women aged 55 to 64. They were either unemployed or not in the labour force and would not have been able to contribute to an RRSP or to participate in an RPP.

Women accounted for 57% of non-savers,<sup>8</sup> although they represented 49% of all taxfilers. Among all taxfilers, most of those without savings (87%) had average incomes below \$20,000 (Table 2). For those with such low incomes before age 65, OAS/GIS and C/QPP benefits are crucial sources of income upon retirement, since together they provide at least 60% of pre-retirement employment earnings. These sources of income were an important consideration in the design of the 1991 RPP and RRSP tax-assistance provisions. It was assumed that pension benefits (from all sources) of 60% to 70% of pre-retirement earnings would be "sufficient to avoid serious disruption of living standards" (Department of Finance, 1989). For low earners, those likely to have little or no RPP/RRSP savings, the public pensions were expected to provide adequate income.

Yet if taxfilers in the \$20,000 to \$29,999 income group were to retire without income other than OAS/GIS and C/QPP benefits, most would receive pension income replacing less than 60% of pre-retirement earnings. A fifth of these people had no savings from 1991 to 1993 through RPPs or RRSPs; almost two-thirds of this group were men. Another 25% saved only sporadically. Income from OAS/GIS and C/QPP would provide them, at age 65, with only about 45% to 60% of pre-retirement earnings.

**Chart C**  
**Taxfilers with incomes below \$40,000 are less likely to save regularly for retirement.**



Source: RRSP room file

\* RPP member and/or RRSP contributor between 1991 and 1993.



Table 2  
Savers \* and non-savers, 1991-1993

	All taxfilers **	% of total	Savers	% of total	Non- savers	% of total
	'000		'000		'000	
<b>Total</b>	<b>13,251</b>	<b>100</b>	<b>7,857</b>	<b>100</b>	<b>5,394</b>	<b>100</b>
Income						
Under \$10,000	4,425	33	778	10	3,647	68
\$10,000-19,999	2,428	18	1,364	17	1,064	20
\$20,000-29,999	2,225	17	1,772	23	453	8
\$30,000-39,999	1,711	13	1,556	20	155	3
\$40,000-49,999	1,099	8	1,053	13	45	1
\$50,000-59,999	648	5	632	8	16	-
\$60,000-79,999	465	4	456	6	9	-
\$80,000 or more	251	2	245	3	6	-
Sex †						
Men	6,758	51	4,430	56	2,328	43
Women	6,488	49	3,426	44	3,062	57

Source: RRSP room file

\* Savers are those who belonged to an RPP or contributed to an RRSP in at least one year.

\*\* Taxfilers aged 25 to 64 who filed all three years.

† Does not add to the total as the sex of some taxfilers was unknown.

### How much is being saved?

The annual amount saved in RPPs and RRSPs grew from \$27.6 billion in 1991 to \$31.4 billion in 1993. Most of this growth resulted from an increase in RRSP contributions. Although RPP savings (that is, PAs) rose from 1991 to 1992, they fell between 1992 and 1993, as did the number of people participating in RPPs.

For those participating in either an RRSP or an RPP, or both, average savings for both plans combined grew from \$4,049 in 1991 to \$4,580 in 1993, up about 6% each year,<sup>9</sup> much more than the growth in their total income.

### Proportion of total income saved

Those participating in RPPs or contributing to RRSPs in 1993 saved 10.6% of their income through these programs combined.<sup>10</sup> This was up from 9.7% in 1991 and 10.0% in 1992. Once again, this increase was due almost entirely to growing RRSP contributions.

Taxfilers with incomes ranging from \$20,000 to \$29,999 saved the least (9.0%); those making \$60,000 to \$79,999 saved the most (13.0%). The savings rate for those bringing in less than \$20,000 (10.6%) was relatively high because that group includes people whose income was higher the previous year. This gave them more RRSP contribution room, which they used extensively by making significant contributions. People in the highest income group (\$80,000 plus) saved a somewhat lower proportion (7.7%) through these programs, partly because of the limit on tax-assisted savings.<sup>11</sup>

In 1993, the savings rate was a good deal higher (14.0%) for persons who belonged to an RPP and also contributed to an RRSP. Those who participated in only one of these programs saved less (8.4% through RPPs and 8.7% through RRSPs).

## Summary

Almost 60% of taxfilers participated in RPPs or RRSPs between 1991 and 1993. Participation was very heavy among those with annual incomes averaging \$30,000 or more during this three-year period: 94% belonged to an RPP and/or made RRSP contributions in at least one year; 83% did so all three years.

Because most (69%) of those with incomes averaging less than \$20,000 had no savings through RRSPs or RPPs, benefits from OAS/GIS and C/QPP will likely be an important source of retirement income; in some cases, these benefits could provide incomes higher than pre-retirement earnings.

For those with average annual incomes of \$20,000 to \$29,999 between 1991 and 1993, the picture is somewhat different. A fifth of them had no savings through RRSPs or RPPs during this period; another quarter saved only one or two of the three years. Without such sources of income at retirement, many may end up with income amounting to less than 60% of their pre-retirement employment earnings.

In 1993, savings through RPPs and/or RRSPs amounted to a considerable proportion of the total income of participants (10.6% on average). The growth in savings from 1991 to 1993 was due almost entirely to increased RRSP contributions. □

## Notes

1 People may also use personal savings, investments or assets such as a home to save for retirement. Because the extent to which this is being done is difficult to quantify, such savings, although important, are not considered in this analysis.

2 Subsequent references to RPPs in this article include DPSPs.



3 Only those with earned income may contribute to an RRSP. Earned income consists largely of employment income but also includes such items as alimony and maintenance income, net rental income and C/QPP disability benefits. Employment income is required for RPP participation. But persons who have only certain types of employment income (for example, self-employment income from an unincorporated business) or who work for an employer not providing an RPP would not have access to an RPP.

4 Unlike RRSP contributions, however, money in an RPP may not be withdrawn prior to retirement; it must be used to provide a retirement income. Somewhat different rules apply to amounts accumulated in DPSPs; these monies may be withdrawn as a lump sum at termination of employment, retirement or death.

5 Because some people participated in both RPPs and RRSPs, the proportion participating in at least one of these plans is smaller than the sum of the proportions participating in each separately.

6 This is the amount reported on line 150 of the income tax return.

7 Age does make a difference for those with incomes between \$10,000 and \$19,999. The proportion with savings grows from one-half for persons aged 25 to 34 to two-thirds

for those 55 to 64. Approaching the age of retirement is obviously an incentive to save.

8 Some of these women would have RRSPs paid for by their spouse. See "RRSPs – unused opportunities."

9 The PA is a proxy for the contribution cost of benefits and could therefore understate or overstate the value of a pension earned in a year. For members of defined benefit plans, \$1,000 is deducted when the PA is calculated; this understates the contribution cost, particularly for those with smaller PAs. In addition, a portion of income is not considered when the PA is determined; this would affect only the higher income earners.

10 Because the PA is not an exact measure of savings through an RPP, the savings rate should be viewed as an approximation only (see previous note). It is most useful when comparing one year with another. A recent study by the Canadian Institute of Actuaries (CIA) suggested an average savings rate target of 8.9% from age 30 to 64 in order to generate retirement income of 80% of employment earnings up to about \$10,000 (in 1994) and 70% of earnings over that. The study also suggested savings rate targets by age and income. (CIA, 1995).

11 The limit on tax-assisted savings is 18% of the previous year's earned income up to a maximum dollar amount. For 1993, that maxi-

mum was \$12,500. Someone with a total income of \$100,000 in 1993 who contributed the maximum (assuming no unused room was carried forward) would save 12.5% with tax assistance, because of the \$12,500 ceiling; if their income was \$150,000, the proportion saved would be 8.3%.

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# RRSPs – unused opportunities

Hubert Frenken

In 1994, the aggregate amount taxfilers could claim as registered retirement savings plan deductions (the total RRSP room) was \$133 billion, \$28 billion more than the year before. This accumulation results from continued non-use or limited use of RRSPs by a large segment of the tax-filing population.

Unlike employer-sponsored registered pension plans (RPPs), which, when available, are nearly always compulsory, RRSP participation is voluntary. And, while access to RPPs is limited (just 35% of the total labour force were in employment situations providing RPPs in 1993), RRSPs are open to virtually all workers. Even RPP members may top up their pension savings with RRSP contributions, with some exceptions.<sup>1</sup>

This article provides previously unavailable information on RRSPs by tracking taxfilers' RRSP participation over a three-year period. Earlier analyses determined which persons were most likely to contribute in a specific year and how much of that year's total RRSP room was used (Frenken, 1990; Frenken and Maser, 1993). This article describes taxfilers' contribution habits in the three years: who contributed regularly, sporadically or not at all. It also explores the extent to which individuals used their RRSP room: whether they exhausted their limit, used only a portion, or left all of it unused.

## New database

This study is based on data from a personal tax file covering 1991 to

1993. (For a description of the file and definitions of terms used in this article, as well as an explanation of the current legislation governing RRSPs, see "Tax assistance for pensions and RRSPs" in this issue.) There are some data limitations, such as the lack of information on family income. The individual's decision to contribute, and the amount deposited, may depend in some measure on the combined husband/wife income. Moreover, contributions are often claimed by the spouse with the higher taxable income (most frequently the husband), but credited to the partner's RRSP. It is not possible to identify and quantify spousal contributions.<sup>2</sup> Finally, the effect of the recent recession on RRSP participation and contribution levels cannot be determined,

because legislation was changed considerably in 1991, and data for 1994 are not yet available.

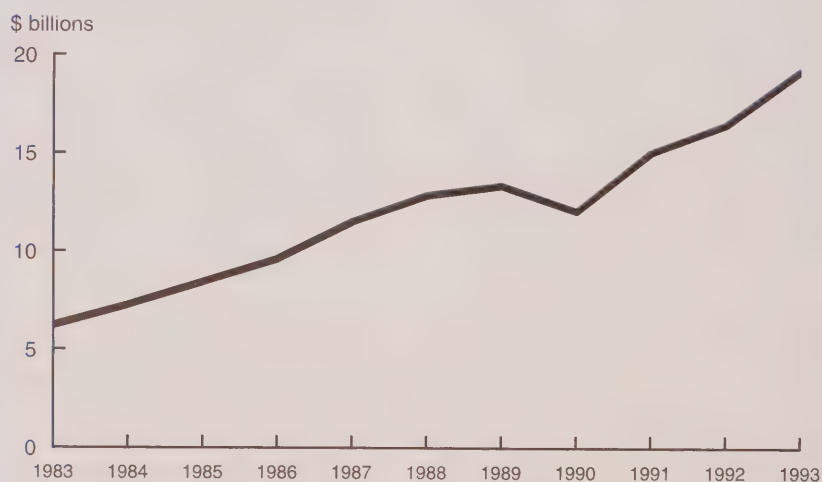
Despite these limitations, this file provides the first opportunity for detailed longitudinal analysis of RRSP participants. This study complements the article, "Who's saving for retirement?" (in this issue).

## Recent contribution growth

Legislation that came into effect in 1991 not only increased RRSP contribution opportunities for many taxfilers, but also allowed unused RRSP room to be carried forward to future years.

Although the total assessed income of all taxfilers only doubled from 1983 to 1993, annual contri-

Chart A  
RRSP contributions have more than tripled since 1983.



Sources: Small Area and Administrative Data Division and RRSP room file

Note: The 1990 decrease can be attributed to the recession and the removal of some contribution opportunities; subsequent dramatic growth resulted from new legislation in 1991.

Hubert Frenken is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-7569.



butions more than tripled, from \$6.2 billion to \$19.2 billion (Chart A). However, the bulk of RRSP growth has taken place since 1990. While the total assessed income of all taxfilers increased just 11% from 1990 to 1993, RRSP contributions grew 60%.<sup>3</sup> Part of this growth may be attributed to the growing popularity of group RRSPs. There are no data on their number or their participants.

Although some contributions are not subject to the standard deduction limits (see *Different types of contributions*), the bulk, known as “normal contributions,” are. From 1991 to 1993, four out of every five dollars contributed were charged against the available RRSP room (Table 1).

### Growth in unused room even faster

Since many eligible taxfilers either do not contribute, or use up only part of their entitlement, and since unused room is carried forward to subsequent years, the total room

### Different types of contributions

Annual contributions include amounts subject to the standard deduction limits (“normal” contributions) as well as rollovers of eligible income into RRSPs. The bulk of annual deposits are normal contributions, although the amounts rolled over are not insignificant: \$9.2 billion over the 1991-to-1993 period, or 18% of the total (Table 1).

Nearly all persons with rollovers also made normal contributions. Of the 6.7 million taxfilers who contributed at least once in the three years, just 3% had rollovers only. Many of these people were likely pensioners who did not have earned income and were therefore ineligible to make normal RRSP contributions.<sup>4</sup> (For an explanation of the need for earned income and a description of the way RRSP room is calculated, see “Tax assistance for pensions and RRSPs” in this issue.)

### Rollovers

There are two types: retiring allowances rolled over to the taxfilers’ own RRSPs and periodic pension pay-

ments rolled over to spousal RRSPs. Persons with rollovers tend to be older, because retiring allowances, which are often payments in recognition of long service, are more frequently received by older workers, and retirement pensions are generally not paid before age 55.<sup>5</sup>

Men were much more likely than women to roll over retiring allowances and pension income.<sup>6</sup> From 1991 to 1993, men rolled over two-thirds of the \$6.9 billion in retiring allowances and 93% of the \$2.3 billion in pension payments. The latter were deposited into their spouses’ RRSPs.

Also, taxfilers with rollovers, especially those with transfers of retiring allowances, tended to be in the higher income brackets. These lump sum amounts often raise a recipient’s total income significantly, providing a greater incentive to use tax-deferral opportunities. In 1993, 57% of taxfilers with such rollovers had income in excess of \$60,000 and their deposits amounted to 80% of total retiring allowance rollovers.<sup>7</sup>

accessible to taxfilers has been increasing much faster than aggregate normal contributions.

In 1991, the year the new legislation came into effect, the total room was just \$43.5 billion. In 1993, it was \$105 billion and by 1994 it had grown to \$133 billion (Table 2).<sup>8</sup> Although the \$12.3 billion in normal contributions in 1991 were nearly 30% of that year’s available room, the \$15.5 billion contributed in 1993, despite being 27% higher, represented only 15% of that year’s potential.

Even though more than 80% of taxfilers are eligible to contribute to RRSPs, only a minority have traditionally done so. Over the 1991-to-1993 period, 6.5 million or just 38% of the 17 million taxfilers with earned income contributed in one or more of these three years. Low incomes (depending also on family

Table 1  
RRSP contributors and contributions

	1991	1992	1993
<b>Type of contribution</b>			
All types			
Number of contributors ('000)	4,699	4,892	5,110
Total amount contributed (\$ billions)	15.0	16.4	19.2
Average contribution (\$)	3,200	3,360	3,750
Normal *			
Number of contributors ('000)	4,558	4,739	4,953
Total amount contributed (\$ billions)	12.3	13.5	15.5
Average contribution (\$)	2,690	2,860	3,140
Rollovers of retiring allowances **			
Number of contributors ('000)	88	95	107
Total amount contributed (\$ billions)	2.0	2.1	2.8
Average contribution (\$)	23,110	22,420	26,110
Rollovers of pension payments †			
Number of contributors ('000)	148	160	167
Total amount contributed (\$ billions)	0.7	0.8	0.8
Average contribution (\$)	4,880	4,890	5,080

Source: RRSP room file

\* Subject to the standard deduction limits.

\*\* Includes income transfers from other eligible sources.

† Periodic payments from employer-sponsored pension plans and deferred profit sharing plans rolled over into spousal RRSPs.



Table 2  
RRSP room

	Unused room	New room	Total room
	\$ billions		
1991	...	43.5	43.5
1992	31.1	43.8	74.9
1993	61.3	43.7	105.0
1994	89.5	43.5	133.0

Source: RRSP room file

\* Because the new legislation came into effect in 1991, there was no unused room that year.

income) may have made it difficult for many to contribute. Nearly 7 million eligible taxfilers (41% of the 17 million) had personal annual incomes that averaged below \$10,000 during the three years. Among these low income filers, fewer than 12% made RRSP contributions.

While 41% of men with RRSP room contributed between 1991 and 1993, only 35% of eligible women did so, partly because there are proportionately more low income and fewer high income female taxfilers.<sup>9</sup>

RRSP contributions are not significant for taxfilers under 25 and over 64. Relatively few have RRSP room and if they have, they usually don't participate.<sup>10</sup> Even those who do contribute tend to use up only a small portion of their available room. Between 1991 and 1993, just 16% of eligible taxfilers in these two age groups made contributions, which, in turn, accounted for only 5% of all RRSP deposits in those years. The remainder of this analysis, therefore, is limited to the population aged 25 to 64 (essentially the working age population), and considers only their "normal" contributions.

### Frequency of contribution

More than 5.9 million taxfilers aged 25 to 64, one-third of all those with RRSP room, contributed at least once in the 1991-to-1993 period. Of these contributors 49%

participated each year, 25% in two and 26% in only one.<sup>11</sup> Under 40% of those in the 25-to-34 age group contributed every year, while 57% of 45 to 54 year-olds did so (Chart B).

Nearly 2.6 million contributors aged 25 to 64 were women (44%) and their annual incidence of participation was only slightly less than that of men (47% versus 51%). Contributors who did not participate in an RPP or DPSP contributed on a more regular basis than those who were RPP/DPSP members.<sup>12</sup>

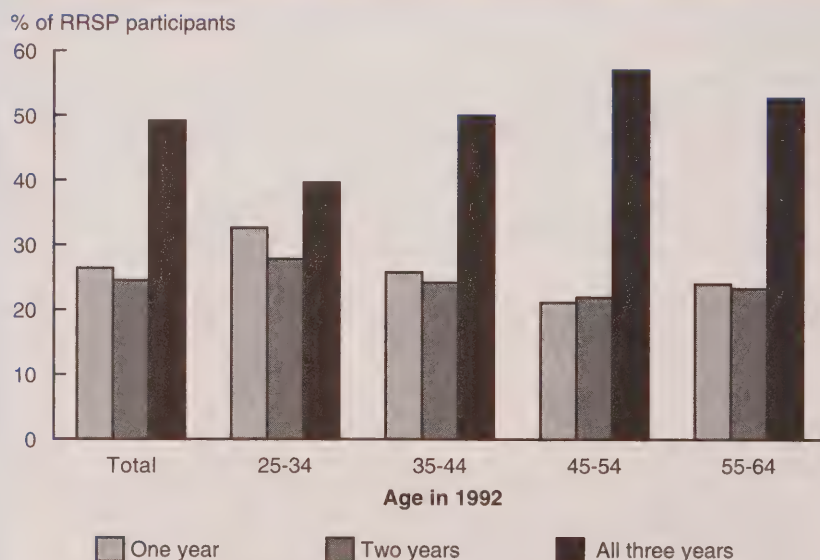
Not surprisingly, taxfilers with higher incomes are more likely to contribute each year. Nearly 72% of contributors with annual incomes averaging \$60,000 or more over the three years participated every year, while only 29% of those with incomes averaging below \$20,000 did so (Chart C).

### Percentage of room used

Each year, about two-thirds of taxfilers aged 25 to 64 with RRSP room opt not to use this opportunity and, among those who do contribute, a growing proportion claim less than one-quarter of the room available to them. In 1991, just 18% of RRSP contributors used less than 25% of their available room. By 1993, because of the carry-forward of unused room, that proportion had increased to 38%. At the other end of the spectrum, the percentage of participants who contributed to the maximum or near-maximum decreased, although it continued to exceed 30% of all contributors in 1993 (Table 3).

Chart B

From 1991 to 1993, almost half of RRSP participants contributed each year.



Source: RRSP room file

Chart C

The higher the income, the more likely RRSP participants contributed each year.



Source: RRSP room file

Taxfilers aged 25 to 64 who claimed all or virtually all their available room in 1993 numbered nearly 1.5 million. More than 700,000 of them had a pension adjustment (PA). They therefore topped up their RPP/DPSP savings with the maximum RRSP contributions possible.<sup>13</sup>

Men and women seem to use RRSP room similarly.<sup>14</sup> And having a PA has little effect on the extent to which contributors take advantage of RRSP opportunities. However, the likelihood of using all available RRSP room increases with age. In 1993, just 18% of RRSP contributors aged 25 to 34 made the most of their RRSP opportunities, while nearly 49% of those between 55 and 64 contributed the maximum allowed (Chart D).

To a large extent, these age differences can be attributed to income (as well as to lower financial obligations at higher ages). High income RRSP participants are

much more likely to use up their contribution room than are those with low or medium income. In 1993, almost 56% of the 833,000 RRSP contributors with incomes of \$60,000 or more took advantage of all their available room, while less than 17% used up less than one-

quarter. On the other hand, of those who had incomes below \$20,000, only 28% used 95% or more of the room available to them and 38% used less than one-quarter.

## Summary

The number of RRSP contributors and their total deposits have grown significantly since legislation allowing new opportunities came into effect in 1991. While some taxfilers were able to roll over certain types of income into RRSPs, the bulk of contributions were limited to taxfilers' available room.

In the aggregate, RRSP room has been growing dramatically since 1991, reaching \$133 billion in 1994. Because opportunities are greatly underused by many taxfilers, this room will most likely continue to grow. Less than 20% of eligible taxfilers aged 25 to 64 contributed in each of the three years, and in 1993 only 11% of those eligible to contribute used up all of their available room.

Participating women are just as likely as men to contribute to the maximum. And being an RPP or DPSP member does not affect the likelihood of making maximum contributions.

Table 3  
Distribution of taxfilers (with RRSP room) and contributors aged 25 to 64

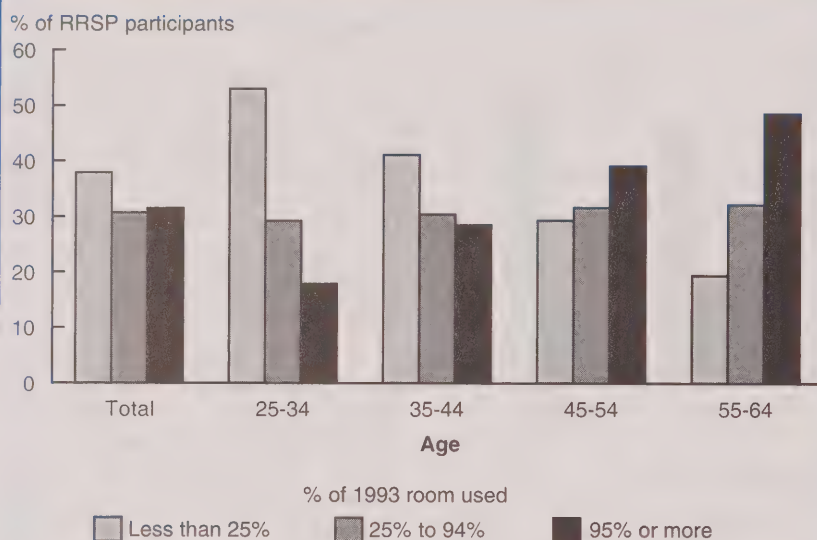
	1991		1992		1993	
	Taxfilers	Contributors	Taxfilers	Contributors	Taxfilers	Contributors
%						
Proportion of total room used						
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Nil	64	...	66	...	66	...
1% to 24%	6	18	11	32	13	38
25% to 49%	7	19	6	18	5	16
50% to 74%	5	13	4	10	3	9
75% to 94%	4	10	3	8	2	6
95% and over	15	41	11	32	11	31

Source: RRSP room file



Chart D

**Almost half the 1993 RRSP participants aged 55 to 64 contributed to their limit.**



Source: RRSP room file

Age and income play important roles in the decision to contribute and in the extent to which available room is used. Older taxfilers and those with high incomes are more likely to maximize their contribution opportunities than are younger or less well off persons, since they generally have greater discretionary income and greater incentive to reduce their tax liability.

Assuming no changes in legislation, current patterns of contribution foreshadow major consequences for RRSPs: in 1996, as baby boomers begin turning 50, participation rates and contributions are likely to surge, possibly diminishing the rate of growth in unused room.

### Update

Since these analyses were completed, Statistics Canada has released 1994 data on contributors and contributions. More than 5.3 million taxfilers contributed \$20.9 billion that year. For further information contact Small Area Administrative Data Division at (613) 951-9720.

### Notes

1 Some RPP members with high pension adjustments may not have any RRSP room. "Tax assistance for pensions and RRSPs" (in this issue) explains the effect of RPP and deferred profit sharing plan membership on RRSP room.

2 For information on the role of spousal RRSPs in the accumulation of RRSP savings by women, and the role of family income in RRSP contributions, see Frenken (1991).

3 Whereas average contributions increased from \$2,610 in 1983 to \$2,850 in 1990, they reached \$3,750 in 1993. In 1983, less than 16% of all taxfilers participated in RRSPs; by 1990, 22% contributed, and by 1993, almost 27% did. Although 1990 was an unusually slow year for RRSPs, 1991 participation and average contributions increased dramatically. For an explanation of the reasons for these fluctuations see Frenken and Maser (1993).

The recent participation rate would have been higher had there not been an increase in the number of low income persons filing to benefit from tax credits and rebates. Nearly all were ineligible to contribute to RRSPs.

4 In fact, 80% of taxfilers with rollovers only were 55 or older.

5 Between 1991 and 1993, almost half (48%) of the 277,000 taxfilers with rollovers of retiring allowances were 55 or older; another 23% were between 45 and 54. Moreover, more than 91% of the 233,000 persons who rolled over pension income were 55 or older.

6 Men tend to have more years of service than do women and to be in jobs providing greater benefits, such as severance pay and pension coverage (Belkhdja, 1992; Frenken and Maser, 1992). Thus men are more likely than women to receive significant lump sum payments and/or pension benefits on termination or retirement.

7 A small portion of retiring allowance rollovers are transfers of specific types of benefits from some pension plans, RRSPs and registered retirement income funds (Revenue Canada, 1993). However, not included in rollovers are direct transfers of lump sum receipts from RPPs and DPSPs, which need not be reported on the tax return and so do not show up as RRSP contributions. A growing share of these transfers are locked in until a specified retirement age (Frenken, 1990).

In 1993, \$2.1 billion was withdrawn from trustee pension funds alone on termination of RPP membership. Most would have been transferred directly to RRSPs, including some to locked-in RRSPs (also called locked-in retirement accounts or LIRAs).



8 These data differ slightly from those published annually by the Small Area and Administrative Data Division (SAADD) of Statistics Canada, because SAADD has removed some records from the file and because this article is based on a 2% sample.

9 During these three years, 55% of eligible taxfilers with annual incomes averaging less than \$10,000 (those least likely to contribute) were women. On the other hand, women accounted for just 15% of taxfilers with at least \$60,000 (the ones who nearly always contributed). No consideration is given here to spousal RRSPs, which may provide considerable savings for some women with little or no income.

10 Those under 25 tend to have lower income and are many years from retirement. Many of those 65 or over have no earned income and therefore no RRSP room.

11 Not all taxfilers filed every year. But the bulk of those who didn't were under 25 (1.1 million or one-third of all taxfilers in this age group), another reason for their exclusion from this analysis.

12 Of the contributors with a PA, 45% participated each year; of those without a PA, more than 53% did so. Part of the latter group

are high income self-employed owners of unincorporated businesses, who are excluded from RPP and DPSP participation.

13 This analysis does not distinguish between those limited by the annual dollar amount and those subject to the 18%-of-earned-income ceiling. Also, no data were available on the extent to which taxfilers used the \$8,000 overcontribution allowance. In 1996, this allowance will be reduced to \$2,000. Any amount above this margin is subject to a penalty tax.

14 Some 32% of male contributors and 31% of female contributors claimed 95% or more of their total 1993 room.

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## Perspectives on Labour and Income

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# Women as main wage-earners

Susan Crompton and Leslie Geran

One of the most radical changes in Canadian society in the past 30 years has been the growth of dual-earner husband-wife families. Between 1967 and 1993, the proportion of such families almost doubled from 33% to 60%. In less than a generation, the traditional family with a breadwinning husband and a stay-at-home wife has been transformed into a new norm in which both spouses work outside the home. At the same time, the gap between the employment income of working spouses narrowed. In 1993, working wives earned, on average, 57% as much as their husbands, up from 42% in 1967. (See *Data source and definitions*.)

One effect of these two phenomena has been the growing proportion of working couples in which the wife earns more than her husband. This proportion has risen from 11% to 25% over the last two-and-a-half decades, but the growth has been uneven. Between 1967 and 1982, the incidence rose from 11% to 18% of dual-earner families, or about half a percentage point a year. Throughout most of the 1980s, the rate hovered at about 19%. Then, in the space of five years, the proportion of wives with higher earnings than their husbands' jumped by 6 percentage points, from 19% in 1989 to 25% in 1993, representing a total of 931,000 families (Chart A).

Just as the characteristics of dual-earner families have changed, so have those of single-earner families. In 1967, the wife was the

## Data source and definitions

This article examines selected characteristics of husband-wife families with income from employment (83% of all husband-wife families in 1993). It focuses on couples in which the wife earns either the *majority* of the couple's employment income or *all* of it. Since the emphasis here is on "husband-wife families with earnings," one-parent families and unattached individuals are not covered in this article.

The data are derived from the Survey of Consumer Finances, which is conducted annually as a supplement to the Labour Force Survey. All dollar figures are presented in 1993 dollars rounded to the nearest \$250.

**Earnings:** wages and salaries and/or net income from self-employment. Earnings are also referred to as *employment income*.

**Non-employment income:** includes investment income, government transfer payments, private pensions, annuities, as well as other money income such as scholarships and alimony.

**Earners:** a person who receives wages or a salary (as an employee) and/or net income from self-employment during the reference year.

**Husband-wife family:** married couples and common-law couples with or without children or other relatives living in the same household.

**Dual-earner family:** a husband-wife family in which both spouses report employment income in the reference year.

**Single-earner family:** a husband-wife family in which only one spouse reports employment income in the reference year.

**Primary/Sole earner:** This classification is based strictly on the relative earnings of husbands and wives. The primary earner is the spouse receiving the higher employment income during the reference year (dual-earner families only); the sole earner is the only spouse reporting employment income (single-earner families only). The earnings status of other family members, who may have the highest earnings in the family in a small number of cases, is ignored.

**Government transfer payments:** all social welfare payments from federal, provincial and municipal governments such as Old Age Security, Guaranteed Income Supplement, Spouse's Allowance, Canada and Quebec Pension Plan benefits, Unemployment Insurance benefits, Workers' Compensation, Child Tax Benefit, training allowances, veterans' pensions, social assistance, and disability pensions. Refundable tax credits, both provincial and federal, are included as income.

**Family income:** the sum of incomes reported by all family members aged 15 years and over. Income consists of the sum of employment and non-employment income. All income in kind, gambling gains and losses, capital gains and losses, and so on, are excluded.

**Job tenure:** the continuous number of years a person has worked for the same employer. Job tenure is not synonymous with the number of years a person has been employed.

**Low income cut-offs (LICOs):** Families with incomes below defined cut-offs based on their family size and place of residence (according to its urbanization classification) are defined as having "low income." The 1993 LICOs (1992 base) were used to determine low income status.

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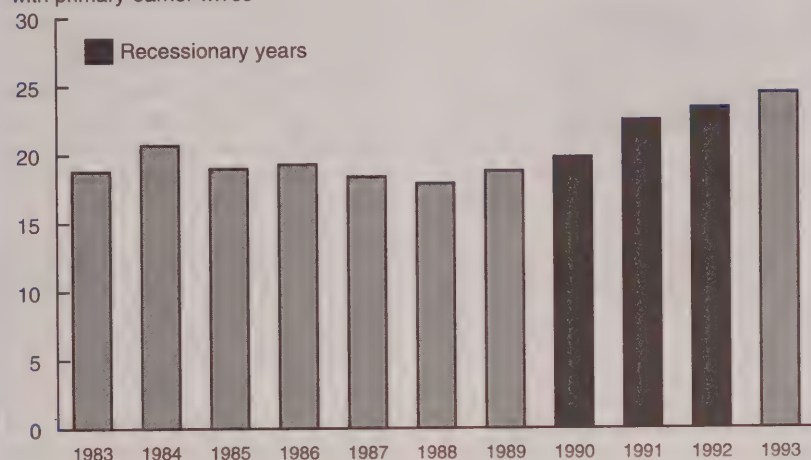
*Susan Crompton is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-0178. Leslie Geran was with the Household Surveys Division. She can be reached at (613) 951-5243.*



Chart A

**The prevalence of wives as primary earners rose rapidly during the recent recession.**

% of dual-earner families  
with primary-earner wives



Source: Survey of Consumer Finances

earning spouse in just 2% of single-earner couples; by 1993, the proportion had risen to 20%, accounting for 298,000 families.

Using the most recent data on families with employment income, this article examines couples in which wives earn more than their husbands, to see how they differ from the majority of working husband-wife families (those in which the husband is the main breadwinner). Since families in which the wife is the sole earner differ from those in which she is the primary earner, each is discussed separately.

### Wives as primary earners in dual-earner families

The growing percentage of wives who earn more than their husbands reflects in part women's long-term movement into higher paying managerial and professional occupations and their accumulated job experience (Hughes, 1995;

Belkhodja, 1992). It also mirrors the much slower rise in men's average earnings over the same period.<sup>1</sup> However, the rapid increase in wives as primary earners during the 1990-92 recession suggests that many became the family's main breadwinner by default. Between 1989 and 1993, most of the full-year, full-time earners who lost their jobs were men (84%). High-wage managerial and manufacturing jobs, held mostly by men, were particularly hard hit. Of course, many men still received earnings, albeit at a reduced level, from part-year or part-time employment. However, the combination of the recession and women's rising earnings left many wives in dual-earner families positioned to become primary earners in the early 1990s.

Although women may have replaced men as the main earner in many families during the recession, in general, they could not match men's earning power. In 1993, the

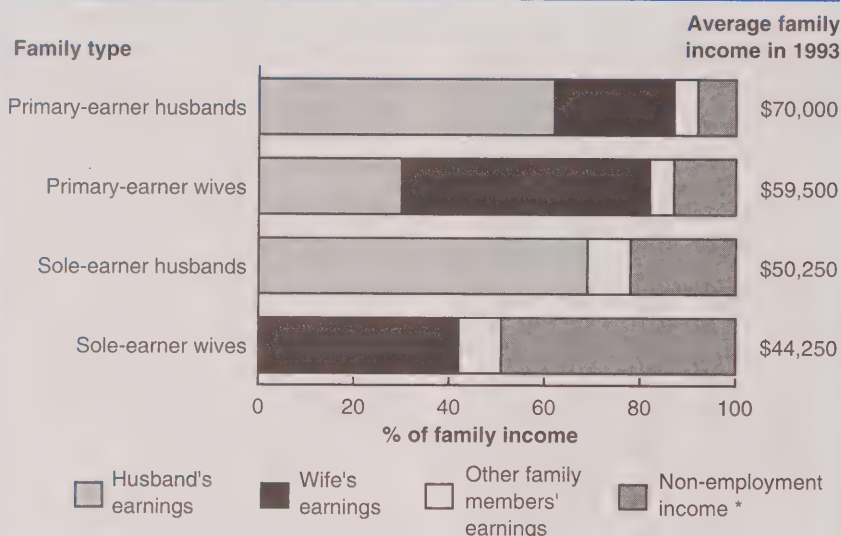
average employment income of primary-earner wives (\$31,000) was about 30% less than that of husbands who were primary earners (\$43,250). This disparity played itself out in all the major occupation groups. Primary-earner wives were more likely to be employed in managerial or professional occupations – 48% compared with 35% of primary-earner husbands – but they made almost one-third less than their male counterparts.<sup>2</sup> Furthermore, of those primary-earner wives who were neither managers nor professionals, almost 80% worked in clerical, sales or service jobs, and had average earnings ranging from \$24,000 to \$30,000. In contrast, 60% of non-managerial, non-professional primary-earner husbands worked in blue-collar occupations and reported average earnings of \$37,000 to \$40,000.<sup>3</sup>

A number of reasons may account for the difference in the earnings of male and female breadwinners. One factor is work pattern: although primary-earner wives were slightly more likely than primary-earner husbands to have been employed throughout 1993, they were considerably less likely to have worked full time (86% versus 96%). A second factor is age: primary-earner wives tended to be slightly younger than their male counterparts – having a median age of 38 compared with 40 – and therefore lacked the work experience of some of the men. Both these factors can influence a woman's job tenure and, thus, her salary level.

Since the great bulk of family income comes from employment, the lower earnings of primary-earner wives affect the financial well-being of the families that rely on them. In 1993, in both types of primary-earner family, earnings from the other spouse accounted for about \$17,500 and earnings from other family members for a



**Chart B**  
When the wife is the sole earner, non-employment income is significant.



Source: Survey of Consumer Finances

\* Includes government transfer payments, private pensions, annuities, investment income, and other money income such as scholarships and alimony.

## Wives as sole earners in husband-wife families

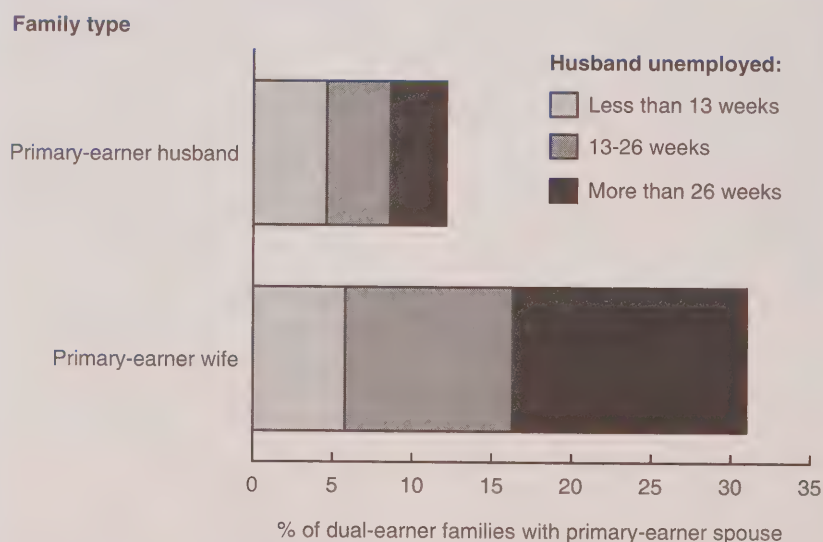
Families in which the wife is the only spouse earning employment income have become more common. In 1993, they accounted for 20% of husband-wife couples with a single earner, up from 2% in 1967. But unlike dual-earner couples with primary-earner wives, their rate of increase has been steady over the last 26 years and reflects somewhat different circumstances.

The increase can be traced principally to the general aging of the population. Sole-earner wives and their husbands are generally older: 60% of the husbands are 55 or over, as are 43% of the wives. In families where the sole earner is the husband, about half (47%) these men are between 25 and 44. This "generation gap" suggests the proportion of families with sole-earner wives may be growing mainly

further \$3,000 to \$3,750. Since families of primary-earner wives reported an average income of \$59,500, 15% less than families of primary-earner husbands (\$70,000), the difference in the average income of the two family types was due principally to the main breadwinner's earnings (Chart B).

The husband's unemployment, reflected in his much smaller contribution to family income, points to the main reason for the sharp rise in primary-earner wives in recent years. In almost one-third of families in which the wife was the higher earner, the husband had been unemployed at some point in 1993; in fact, almost half had been jobless for more than 26 weeks (Chart C). In contrast, 88% of primary-earner husbands had been employed full year; of this great majority, almost all had worked full time.

**Chart C**  
In one-third of dual-earner families with primary-earner wives, the husband was unemployed at some time in 1993.



Source: Survey of Consumer Finances

because the husbands retire and the wives, usually younger, continue to work. Indeed, the labour force participation rates of older women have continued to rise during the 1990s while those of women under 45 have not (Butlin, 1995).

Sole-earner wives were moderately less likely than sole-earner husbands to experience unemployment during the year (17% versus 20%). But of those sole earners who were employed full year, less than two-thirds (64%) of wives worked full time, compared with 88% of husbands. Also, sole-earner wives reported average employment income of \$18,250, while sole-earner husbands made almost twice as much, at \$34,750.

Despite this dramatic gap in the breadwinners' earnings, families in which wives were the only employed spouse recorded average income of \$44,250 in 1993, only about 12% less than that reported by families with sole-earner husbands (\$50,250). The reason is simple: where the wife was the sole earner, almost half the family income came from sources other than employment, such as government transfer payments, private pensions and investments. In contrast, only about one-fifth of the income in families where the husband was the sole earner came from non-employment sources.

### Wives' earnings keep families above the low income cut-offs

The contribution of wives' earnings to dual-earner families' ability to stay above the low income cut-offs (LICOs) was overwhelming where the wife was the primary

earner: 7% of such families fell below the LICOs in 1993, whereas almost half (45%) would have done so without her earnings. In other words, 38% of these families were riding sufficiently close to the line that the wife's employment income, although much lower than a primary-earner husband's, was crucial to keeping the family above the LICO.<sup>4</sup>

On the other hand, in families where the husband was the primary and the wife the secondary earner, her effect on the family's LICO status was quite small: in 1993, 9% of such families would have fallen below the LICO without the wife's (secondary) earnings, as opposed to the 4% that actually did.

### Conclusion

The importance of women as wage-earners in the family has been growing since 1967. In fact, by 1993, wives were the primary wage-earners in one-quarter of dual-earner families and the sole earner in one-fifth of single-earner couples. Even when they were the family's financial mainstay, however, women's earnings still lagged significantly behind those of men in a similar situation.

The trend toward wives as primary earners accelerated during the 1990-92 recession mainly because men were losing their jobs. This phenomenon shows some evidence of being temporary, since men benefited considerably from the substantial employment gains of 1994. On the other hand, the growing incidence of wives as sole earners appears to be related to the aging of the workforce rather than to the business cycle. □

### Notes

1 Average earnings of all working women rose 60% from 1967 to 1989, and increased another 2% from 1989 to 1993. The corresponding figures for men were an increase of 25% followed by a decline of 6%. Over the whole period, growth in average earnings from employment was 63% for women and less than 18% for men.

2 One reason for the higher proportion of primary-earner wives in such occupations is their higher education: 22% had a university degree, compared with only 15% of primary-earner husbands. The wives' lower earnings may be due to their being in the lower levels of managerial and professional jobs.

3 Blue-collar occupations consist of the processing and machining, product fabricating, construction, and transportation occupations. The only occupation in which the average earnings of primary-earner husbands were less than \$36,500 was farming, at \$29,000.

4 The sample size of LICO families in which the wife is the sole earner is too small to support further analysis.

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# Men retiring early: How are they doing?

Dave Gower

During the first half of this century, men generally stayed in the labour force until at least age 65. In the second half, however, more men have been leaving at younger ages (Chart A). Initially, the percentage of men aged 55 to 64 who were in the labour force declined slowly, from 85% in 1954 to 80% in 1974. But in the following 20 years, the declines in labour force participation were much more rapid, dropping about 10 percentage points each decade to stand at 60% in 1994.<sup>1</sup>

The observed declines could be due to either of two factors. Men aged 55 to 64 may be participating intermittently, that is, dropping in and out of the labour force several months at a time, or they may be leaving the labour force permanently to retire. According to this study, about three-quarters of men aged 55 to 64 who are not in the labour force at any point in time appear to have left it permanently; this proportion has been relatively constant for the past decade and a half.

Why are these men retiring earlier? There are two broad possibilities. With the restructuring of the economy leading to employment declines in the goods-producing sector, and with claims that continuous skills upgrading is the order of the day, it is possible that they have been forced into retirement by job losses and bleak re-employment possibilities. Alternatively, with the growth in real wages in the 1960s and 1970s (Rashid, 1993), along with dramatic asset appreciation through home ownership between the 1960s and 1980s, these men may

simply have chosen to retire early with retirement incomes sufficient to maintain a comfortable lifestyle.

This is not to say that retirement income can be used to distinguish between voluntary and involuntary retirement. Some men with very low earnings prior to retirement may expect to find themselves only slightly worse off in retirement, or perhaps even slightly better off (Maser, 1995), and so retire voluntarily. Similarly, persons relatively well off at retirement, owing to high pre-retirement incomes, may have been obliged to leave the labour force because of illness or job loss.

Nevertheless, the extent and nature of retirement income is at least indicative of the motivations

for retirement. This article is intended to provide information on the levels and sources of income of retired men aged 55 to 64 (see *About the data*).

## Retirees have lower incomes

A useful first step in evaluating the income situation of early retirees is to compare their incomes with those of men the same age who are still working full year full time. This is not the same as measuring the income drop that accompanies retirement, since that would require longitudinal data (where the same people respond in consecutive surveys), which are unavailable from the data sources used for this study. In other words, the income of retirees prior to leaving the labour force is unknown.

Chart A  
A growing proportion of men are retiring before age 65.



Sources: Labour Force Survey and Survey of Consumer Finances

\* Out of the labour force in the survey month and throughout the preceding calendar year.

Dave Gower is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-4616.



## About the data

### Sources

The source of participation rate data, the monthly Labour Force Survey (LFS), identifies persons in or out of the labour force during a selected week each month. In other words, the survey collects a series of independent snapshots. This means that observed declines in male participation rates could be due to the intermittent participation of 55 to 64 year-olds rather than to their permanent departure from the labour force.

However, data from the Survey of Consumer Finances (SCF), conducted in April of each year as a supplement to the monthly LFS, capture a relatively stable percentage of those "not in the labour force," because they reflect labour force activity over the previous year. These data can be used to show that the declines of the past several decades largely reflect moves to earlier retirement rather than to more intermittent participation.

The SCF data used in this paper were collected in April 1994, but data

on income and weeks of labour force activity relate to the 1993 calendar year.

### Definition

The term "retirement" means different things to different people. For example, a person may officially retire from one job, draw an employer-sponsored pension and take another job, either to fill in the time or to make extra money. Another person may lose his job, without obtaining a pension, and never work or look for work again – perhaps because he has lost hope of finding another job. A third person may reduce his hours of work from full-time to part-time. Yet each may consider himself retired.

For analytical purposes, a firm measure of retirement is required. To be considered retired in this study, a man aged 55 to 64 must have been out of the labour force, that is, neither employed nor unemployed,<sup>2</sup> both in the month of the survey (April 1994) and throughout the preceding calendar year (1993).

### Government transfers helpful

Overall, 90% of retired men aged 55 to 64 with income in 1993

received at least some of it from government sources (Table 2). Not only did the likelihood of receiving such payments rise as income levels dropped, but the reliance on government transfers also grew considerably. For example, men with incomes between \$1 and \$9,999 in 1993 obtained 87% of it from government programs, compared with 17% for men with incomes of \$25,000 or more.

Although government-administered plans accounted for a much greater proportion of the total income of the "poorest" group, the median amount received by retirees in the middle income group was greater: \$9,400 for those with incomes between \$10,000 and \$24,999, versus \$6,800 for those with incomes between \$1 and \$9,999. The median value was lowest for recipients in the top income range.

Reliance on different types of government income varied with total income level. For men with incomes between \$1 and \$9,999, 38% of government benefits were from the Canada and Quebec Pension Plan (see *The Canada and*

However, the available data do show a considerable income disparity between those working and those not. The 1993 median<sup>3</sup> income from all sources was \$17,300 for retired men aged 55 to 64, versus \$38,500 for their counterparts who were employed full year<sup>4</sup> full time – a ratio of 45 cents on the dollar (Table 1).

Three in ten retired men aged 55 to 64 had incomes under \$10,000 (including those with no income), compared with only 5% of men working full year full time. Just 30% of retired men in this age group had incomes of \$25,000 or more, as opposed to 77% of employed men. In higher income brackets, the contrast is even more striking: only 5% of retired men reported 1993 incomes of \$45,000 or more versus 38% of men working full year full time.

Table 1  
Income distribution of retired and employed men aged 55 to 64, 1993

	Retired *		Employed full year full time **	
	'000	%	'000	%
<b>All men</b>	<b>348</b>	<b>100</b>	<b>529</b>	<b>100</b>
With no income	9	3	-- †	--
With total income:				
\$1 to 9,999	93	27	24	5
\$10,000 to 24,999	143	41	92	17
\$25,000 and over	103	30	408	77
\$45,000 and over	18	5	202	38
Median income (\$) ††	17,300		38,500	

Source: Survey of Consumer Finances

\* See About the data.

\*\* Mainly full time for 40 to 52 weeks in 1993.

† Mainly self-employed individuals reporting losses.

†† Calculations are based on men reporting income.

Quebec Pension Plan); the corresponding proportions for men with incomes between \$10,000 and \$24,999, and \$25,000 or more, were 47% and 62%. Men with lower incomes relied more on sources such as Workers' Compensation and welfare. Their relatively light reliance on C/QPP benefits may reflect lower entitlements, which are based on employment earnings and years of pension contributions.

### Private income usually needed for "the good life"

No matter how one defines being well off, substantial private income is usually a requirement. Almost half of early retirees' total 1993 income came from private pensions. An additional 16% was obtained from investments and other private sources (Chart B). As expected, however, the amounts and proportions of revenue from private sources varied according to income group.<sup>6</sup>

Some 86% of men in the \$25,000-and-over bracket received private pensions from a former employer, with a median benefit of \$25,600. In contrast, just over half the men in the middle income range (\$10,000 to \$24,999) reported this type of income, with a median pension of \$11,200. Low income retirees seldom had private pensions (only 8% of those with incomes between \$1 and \$9,999), and when they did, the amounts were small (Table 2).

Investment income was earned by 68% of retirees in the highest income group but by only 24% of those in the lowest group. The median investment income (among men who reported such income) was somewhat higher for the former group (\$2,100 versus \$1,100).

### Family situation also makes a difference

Although 3 in 10 men retiring before age 65 had total incomes

## The Canada and Quebec Pension Plan (C/QPP)

The C/QPP is funded by contributions from both employers and employees. Pension benefits, which are indexed to inflation, vary according to the contributory history of an eligible recipient and the age at which that person starts to draw benefits. The maximum benefit available in 1993 was \$8,008.<sup>5</sup> Prior to 1987 (1984 in Quebec), persons without disabilities had to be 65 to qualify. Now they may draw benefits as early as age 60, although the amount is reduced by 6% for each year short of 65 (for a maximum reduction of 30%).

When these changes were introduced, many eligible people applied for benefits (Frenken, 1991). Although people need not be out of

the labour force to draw benefits (some employment income is permitted), the simultaneous drop in the labour force participation rate of men aged 60 to 64 and the surge in early applications for C/QPP benefits are likely related.

Persons with disabilities, regardless of age, may also qualify for benefits under the plan. Those under 65 do not suffer a penalty, although many receive less than the maximum entitlement because of an intermittent or brief work history. Currently, about 36% of men aged 55 to 64 collecting from the CPP are drawing disability benefits (Health and Welfare Canada, 1993).

under \$10,000 in 1993 (including those with no income), many shared living expenses with other family members.<sup>7</sup> To better evaluate their financial well-being, this study uses family-based low income cut-offs (LICOs), a measure that takes

into account factors such as family size and place of residence.<sup>8</sup>

Overall, 73% of families with retired men aged 55 to 64 (246,000 of 339,000) had family incomes above the LICO in 1993 (Table 3).<sup>9</sup>

Table 2  
Income sources of retired men aged 55 to 64, 1993

	Total income			
	Total	\$1 to 9,999	\$10,000 to 24,999	\$25,000 and over
<b>All retired men with income ('000) *</b>	<b>339</b>	<b>93</b>	<b>143</b>	<b>103</b>
Total income (\$ billion)	6.9	0.6	2.4	3.8
Median income (\$)	17,300	7,200	16,800	33,400
With government income ('000)	306	88	135	82
% of retired men with income	90	95	94	80
% of total income	36	87	51	17
Median government income (\$) **	7,100	6,800	9,400	5,700
With private pension ('000)	170	7	74	88
% of retired men with income	50	8	52	86
% of total income	48	4	35	63
Median pension (\$) **	17,600	2,400	11,200	25,600
With investment income ('000)	148	22	56	69
% of retired men with income	44	24	39	68
% of total income	11	7	9	13
Median investment income (\$) **	1,900	1,100	2,000	2,100

Source: Survey of Consumer Finances

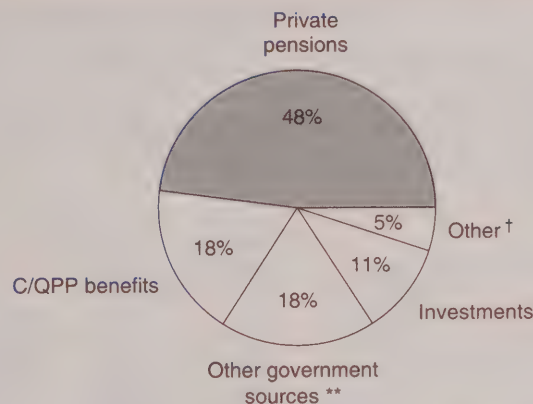
\* The number of retired men with income exceeds the sum of retired men with government, private pension and/or investment income because many men have more than one type of income.

\*\* Calculations are based on men reporting this type of income.



Chart B

**In 1993, private pensions accounted for nearly half the income of early retirees.\***



Source: Survey of Consumer Finances

\* Men aged 55 to 64 who were out of the labour force in the survey month and throughout the preceding calendar year.

\*\* Mainly social assistance and Workers' Compensation benefits.

† Mainly retirement allowances, severance pay and income maintenance plan payments.

But over half of all unattached individuals (56%) had incomes below it. While low income status was more common among "loners," it was by no means confined to them: in 55,000 families with two or more persons (one in five such families) incomes were also below the LICO.

### Home ownership widens the gap

Income is not the only determinant of economic standing. Asset accumulation is also an important indicator of financial well-being after retirement. While data are not available on the full range of retirees' assets, one factor that can be measured is whether they live in rented or owned (with or without mortgage) accommodation.<sup>10</sup>

Only 23% of families with retired men aged 55 to 64 were tenants in 1993 (78,000 families out of 339,000). Most families paying rent had incomes below the LICO (58%); in contrast, 8 in 10 families

living in mortgage-free homes had incomes above the LICO (Table 3). Of course, the rent paid by some low income retirees may be modest (for example, subsidized housing),

while some in the highest income group may prefer rental accommodation, which requires less maintenance on their part. Nevertheless, the comfortable economic situation of many "early retirees" is reflected in the high incidence of home ownership (77%) among their families. Moreover, two-thirds of retirees in families with incomes above the LICO in 1993 lived in mortgage-free homes, as did 41% of those with incomes below the LICO.

### Summary

The income situation of retired 55 to 64 year-old men varies greatly. Those with low incomes depend on government programs for the bulk of their income. They are more likely to live alone than are those with higher incomes. They are also more likely to live in rented accommodation. Retired men with higher incomes tend to benefit more from private pensions and are more likely to live in mortgage-free homes.

Although a substantial number of retired 55 to 64 year-old men were living on relatively comfortable levels of income in 1993, the

Table 3

**Families with retired men aged 55 to 64, by family income, size and home ownership status, 1993**

	Total families	Below LICO *	Above LICO *
		'000	
<b>All families with retired men</b>	<b>339</b>	<b>93</b>	<b>246</b>
Family size **			
Unattached individuals	68	38	29
Two persons	179	38	140
Three or more persons	93	16	76
Home ownership status			
Tenants	78	45	33
Homeowners	261	48	213
With mortgage	58	9	49
Without mortgage	203	38	164

Source: Survey of Consumer Finances

\* LICOs are low income cut-offs. A family's total income is either below or above a specific LICO based on family size and geographic area.

\*\* There may be other unattached individuals or families residing in the same household.



proportion with incomes over \$25,000 was much lower than that of men the same age who were employed full year full time. Moreover, nearly 100,000 families with early retirees (over one in four) were living on incomes below Statistics Canada's low income cut-offs. □

## ■ Notes

1 These data are annual averages from the Labour Force Survey (LFS).

2 To be unemployed, a person must have looked for work in the four weeks prior to the LFS reference week, or been on temporary layoff, or had a job starting within four weeks. In addition, he must not have been working during the reference week, but have been available for work.

3 Half of the retired population of 55 to 64 year-old men had incomes below the median and half had incomes above it.

4 In this article, a full-year worker is one who was employed 40 to 52 weeks in 1993.

5 The annual ceiling was raised to \$8,333 in 1994 and \$8,558 in 1995.

6 Withdrawals from registered retirement savings plans (RRSPs) are not included in these income figures because they are considered a drawing out of savings, rather than income.

7 These are families of two or more individuals who live together and are related by blood, marriage or adoption. They may share their living quarters with other families or unattached individuals, however. Similarly, unattached individuals may live alone or with other people to whom they are not related.

8 Families with income below the LICO spend, on average, a significantly higher proportion on necessities than do Canadian families as a whole. LICOs are calculated for different family sizes and for different areas. For more information on this measure see Statistics Canada (1995).

9 Table 3 deals with families, not individual retirees, unless they are unattached. A family may include more than one retiree; for example, two brothers living together.

10 In the case of retirees living with other family members, the home may be owned or rented by another family member.

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# GREYING OF THE WORKFORCE

Catalogue 75-001E

Government  
Publications

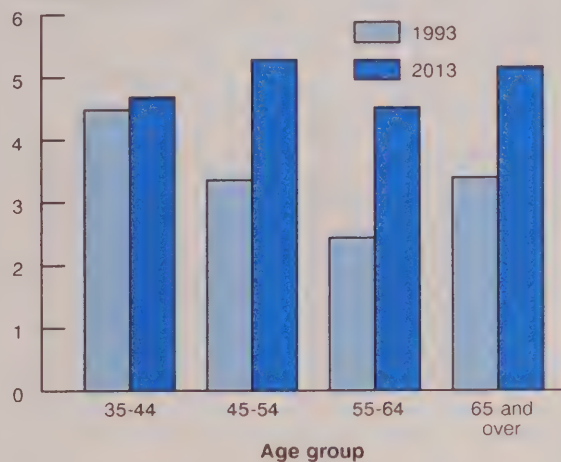
## PERSPECTIVES ON LABOUR AND INCOME

### Some facts and figures on the Canadian workforce

(Concepts, definitions and footnotes are provided on page 4.)

#### A. Over the next two decades, the population 45 and over is expected to grow significantly.

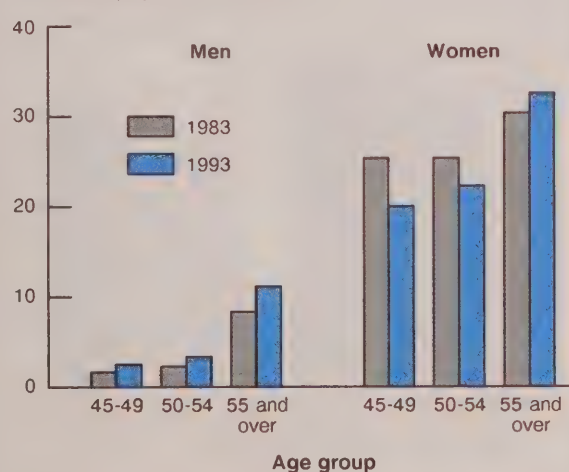
Population (millions)



Source: Demography Division

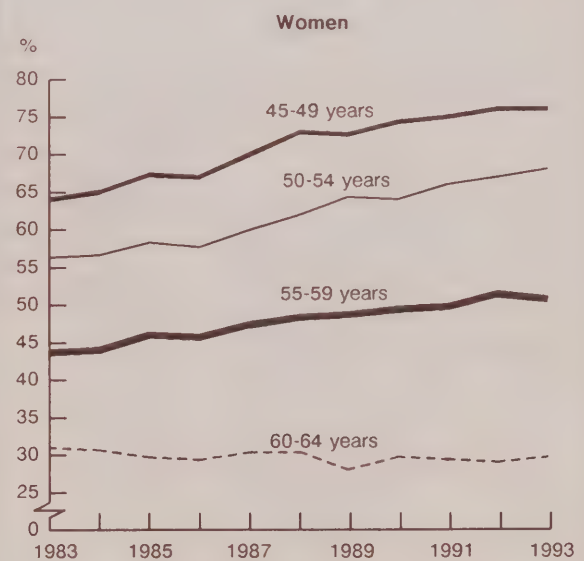
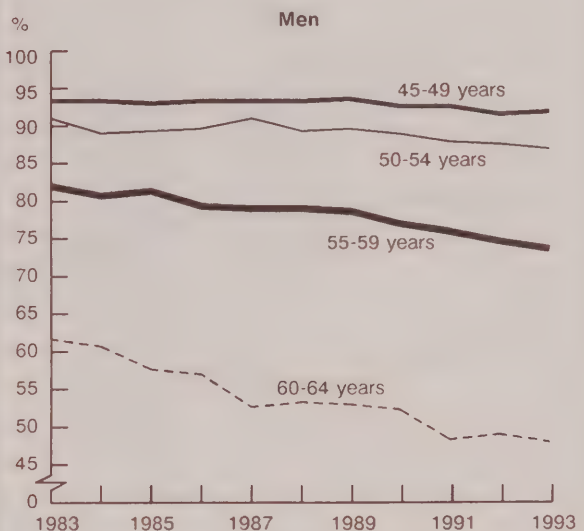
#### B. After age 55, the incidence of part-time work increases substantially.

Workers employed part time (%)



Source: Labour Force Survey

#### C. While men's labour force participation rates have been declining, women's rates have increased or remained steady.

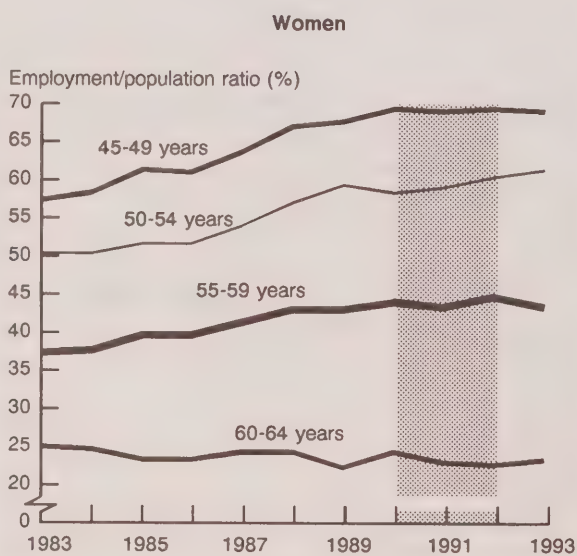


Source: Labour Force Survey



# GREYING OF THE WORKFORCE (continued)

**D. The recent recession had a greater impact on the oldest male workers.**



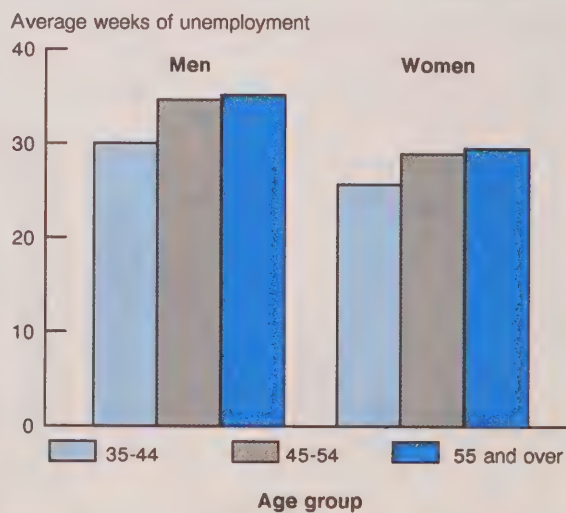
Source: Labour Force Survey

**E. Older workers tend to lose more time from work because of illness or disability.**



Source: Labour Force Survey

**F. The older the worker, the longer the duration of unemployment.**

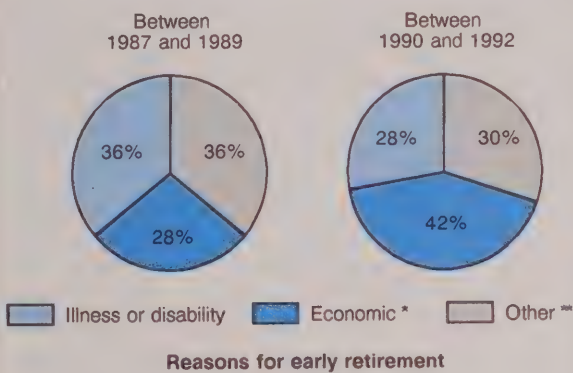


Source: Labour Force Survey, 1993

# GREYING OF THE WORKFORCE (continued)

## G. During the recent recession, the leading reasons for early retirement were economic.

Persons 50 to 69 who retired earlier than planned:



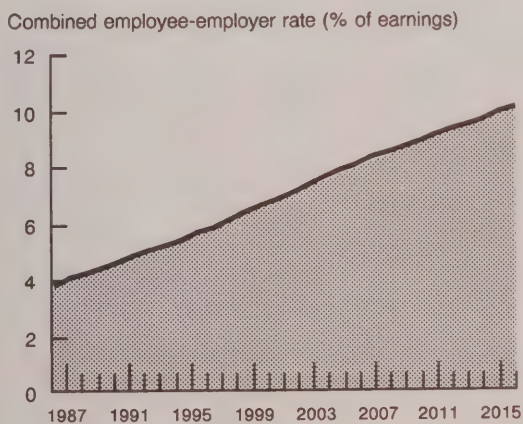
Source: Survey of Persons Not in the Labour Force, November 1992

## I. The proportion of older taxfilers with RRSPs continues to increase.



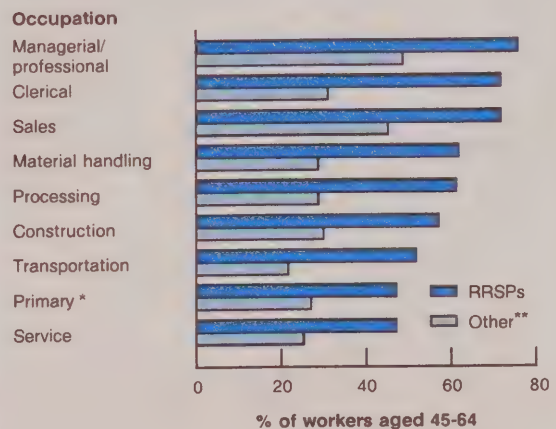
Source: Small Area and Administrative Data Division

## H. To meet the plan's financial obligations, the C/QPP contribution rates\* are scheduled to more than double by 2016.



Source: Finance Canada

## J. Among workers aged 45 to 64, RRSPs are the most popular form of discretionary retirement savings.



Source: Survey on Ageing and Independence, 1991



# GREYING OF THE WORKFORCE (concluded)

## Concepts, definitions and footnotes

- A. A low growth scenario projects a fertility rate of 1.2 births per woman combined with a level of immigration of 140,000 per year. Life expectancy at birth is assumed to increase to 77.2 years for males and to 84.0 years for females by 2011. (Source: *Population Projections for Canada, Provinces and Territories*, Catalogue 91-520.)
- B. Part-time employment consists of persons who usually work less than 30 hours per week at all jobs.
- C. The participation rate is the labour force (the sum of the employed and unemployed) expressed as a percentage of the population aged 15 years and over.
- D. The employment/population ratio is the number of employed persons in a particular group (age, sex, marital status, etc.) expressed as a percentage of the population for that group.
- E. Absences from work for personal reasons are split into two components in the Labour Force Survey: "absences due to own illness or disability" (to which the current chart refers), and "absences due to personal or family responsibilities." For a discussion of both types of absence, see Akyeampong, E.B., *Perspectives on Labour and Income*, Catalogue 75-001E (Spring 1992).
- F. Unemployed persons are those who, during the survey reference week, were without work, had actively looked for work in the past four weeks and were available for work; or, had not actively looked in that period but were on layoff (expecting to return) and were available for work; or, had not actively looked but had a new job to start in four weeks or less, and were available for work.  
The unemployment rate is the number of unemployed in a particular group (age, sex, marital status, etc.) expressed as a percentage of the labour force for that group.
- G. The Survey of Persons Not in the Labour Force, a supplement to the November 1992 Labour Force Survey, covered individuals not in the

labour force, aged 15 to 69. Only respondents aged 50 to 69 who retired earlier than planned were invited to provide the main reason for their decision. For more information, see Siroonian, J., *Perspectives on Labour and Income*, Catalogue 75-001E (Winter 1993).

\* Includes early-retirement incentives, lay-offs, business closures.

\*\* Includes care for relative or friend, wanted to stop working, other reasons and not stated.

- H. C/QPP refers to the Canada and Quebec Pension Plan. In 1985, to meet demands of increasing benefit payments, the federal and provincial governments agreed to raise the contribution rate gradually, starting in January 1987. The current rate schedule, which runs to the year 2016, is reviewed every five years. For further information, see Frenken, H., *Perspectives on Labour and Income*, Catalogue 75-001E (Autumn 1993).

\* Actual to 1994, legislated to 2016.

- I. The onset of the recent recession (1990), coupled with the removal of some contribution opportunities, resulted in a decrease in the number of contributors, while legislation introduced in 1991 generated dramatic subsequent growth. For information, see Frenken, H. and Maser, K., (Winter 1993), and Frenken, H., (Spring 1993), both in *Perspectives on Labour and Income*, Catalogue 75-001E.
- J. "Discretionary" retirement savings refer to registered retirement savings plans (RRSPs) plus other investments and property values. For further information, see Crompton, S., *Perspectives on Labour and Income*, Catalogue 75-001E (Spring 1993).

\* Farming, forestry and mining.

\*\* Investment property and financial instruments.

For further information on concepts and definitions, contact Henry Pold, Labour and Household Surveys Analysis Division, at (613) 951-4608.

# Non-standard work on the rise

Harvey Krahn

Most employed Canadians still have only one full-time, permanent paid job, although the relative size of this majority is slowly declining as various forms of non-standard work become more common. Part-time work has been increasing since the middle of the century, but the trend accelerated during the 1981-82 recession and again in the recession that ushered in the 1990s. Own-account self-employment<sup>1</sup> rates have been slowly rising, and temporary or contract work arrangements are also becoming more common. In addition, the proportion of workers holding more than one job has risen since the early 1980s.

Employers in both the private and public sectors have attempted to increase their flexibility and reduce costs by making greater use of part-time, temporary or contract labour.<sup>2</sup> Some workers – students and young parents, for example – may prefer the flexibility of part-time or temporary work;<sup>3</sup> others, particularly professionals, may enjoy the greater autonomy of self-employment. However, faced with a difficult labour market, many take such jobs involuntarily (Noreau, 1994) or work at a second job to “make ends meet.” The advantages of non-standard work are frequently offset by less job security, lower pay and fewer fringe benefits (Krahn, 1992). Consequently, the growth and distribution of non-standard jobs affect levels and patterns of labour market inequality.<sup>4</sup>

This article uses data from Statistics Canada’s annual General Social Survey (GSS) and the monthly Labour Force Survey (LFS). LFS estimates are used to

*Harvey Krahn is with the Department of Sociology at the University of Alberta. He can be reached at (403) 492-3315.*

## Methodology and definitions

The 1994 General Social Survey (GSS, Cycle 9) contacted approximately 11,500 Canadians. The study included a main sample of 10,000 respondents aged 15 and older and a sub-sample of 1,500 individuals aged 55 to 74. The data were weighted to the non-institutionalized population aged 15 and older in the 10 provinces. Cycle 4 (1989) surveyed 9,338 Canadians aged 15 and older. Both surveys were conducted by telephone and had high response rates (80% in 1989 and 81% in 1994).<sup>5</sup>

The analysis covers only employed persons aged 15 to 64. Individuals usually working less than 30 hours per week (at all jobs, if holding more than one) are defined as part-time workers. Anyone holding more than one job (whether full- or part-time, self-employed or paid) is classified as a multiple jobholder. Among the self-employed, own-account workers (who have no paid employees) are distinguished from employers (who have one or more paid employees) and labelled non-standard workers.<sup>7</sup> Temporary or contract workers are those reporting a job with a specific end-date. The analysis of such workers is restricted to paid workers, since temporary or contract work has a different connotation for the self-employed. (In the case of persons holding more than one job, the main job – that is, the one with the most hours – is used to identify own-account and temporary or contract workers.)

outline the long-term expansion of part-time employment in the Canadian economy. GSS results are used to focus on the developments in part-time work, temporary or contract work, own-account self-employment and multiple jobholding between 1989 and 1994. Data are analyzed by age, sex and industry (see *Methodology and definitions*).<sup>5</sup>

For industry comparisons, a 10-category classification is used. Agriculture is distinguished from other natural resource-based industries (forestry, fishing, mining and utilities). These two industry groups, along with construction and manufacturing, constitute the goods-producing sector. The service sector is sub-divided into 6 categories: distributive services (transportation, communications and wholesale trade); business services (finance, insurance and services to business management); social services (education, health and welfare); public administration; retail trade; and other consumer services (food and beverage, accommodation, recreational, and other personal services). Retail trade and other consumer services are considered “lower-tier” services because employment in these industries is associated with lower pay, fewer benefits, less job security, and lower skill requirements than employment in the other, “upper-tier,” service industries.<sup>8</sup>

In addition to the part-time employment estimates, many other GSS results used in this study have counterparts from the Labour Force Survey. For reasons of sampling variability, questionnaire design, methodology, and so on, estimates from the two sources will differ. However, these differences are not large enough to alter the conclusions drawn.

## Part-time employment

From 1976 to 1994, the proportion of workers employed part time climbed significantly, from 11% to 17% (LFS data). This trend underestimates part-time job creation, however, since many individuals holding several part-time jobs are classified as full-time workers (those working 30 or more hours



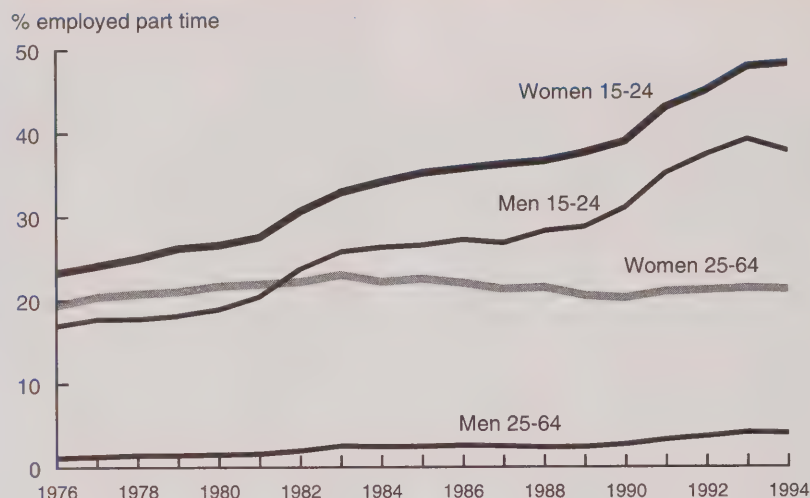
weekly at all jobs combined), and the number of multiple jobholders has been increasing (Pold, 1994). Between 1976 and 1994, the number of part-time jobs actually increased at an average rate of 6.9% annually, compared with 1.5% for full-time jobs. By 1994, 23% of all jobs were part-time, although only 17% of all workers were classified as such.<sup>9</sup>

Part-time rates increased slowly during the 1970s, followed by a sharp jump coinciding with the 1981-82 recession (from 13% in 1981 to 15% in 1983). Between 1983 and 1990, the part-time rate changed very little. But the 1990-92 recession pushed the rate to 17% in 1993.<sup>10</sup> Over the long term, involuntary part-time work also increased, from 12% of part-time workers in 1976 to 23% in 1990 and 36% in 1994.

Rising part-time employment was experienced largely by 15 to 24 year-olds (Chart A), whose rates shot up dramatically during the two recessions. No doubt, many young part-timers are students, for whom a job with fewer hours may be preferable. However, the difficult labour market over the past several years has led to a substantial decline in labour force participation by young people, from 69% in 1990 to 63% in 1994. At the same time, enrolments in postsecondary institutions have risen and young people appear to be remaining in school longer. Corresponding declines in the number of youths employed full time, from 1.6 million in 1990 to 1.2 million in 1994, may partly reflect the growth in involuntary part-time employment and rising school attendance.

Part-time employment for male workers aged 25 to 64 has also increased, but from a much lower base. In contrast, rates for women in this age group have stayed relatively constant.

**Chart A**  
**Part-time employment has been rising among youths since the early eighties.**



Source: Labour Force Survey

Nevertheless, GSS data show that in 1994 women aged 15 to 64 were still three times as likely as their male counterparts to be working part time (Table 1). Between 1989 and 1994, part-time rates rose slightly for men (from 7% to 8%) but declined marginally for women (25% in 1989 and 24% in 1994).<sup>11</sup> By 1994, about 2 million Canadians aged 15 to 64 were working part time, while almost 11 million were full-time workers.

To some extent, part-time work continues to be a service-sector phenomenon (Table 2). In 1989, roughly one-third of workers in the lower-tier services (retail trade and other consumer services) were employed part time, although the proportion had declined slightly by 1994. In these sectors, uneven levels of demand (peak hours for shopping, entertainment and restaurants) provide a strong incentive for using part-timers. The high rates in the upper-tier social services (24% and 22% in 1989 and

1994, respectively) show that this sector also continues to rely heavily on part-time workers (in teaching and nursing, for example).

## Multiple jobs

Partly because of rising part-time rates, multiple jobholding has also become more common. Between 1989 and 1994, the proportion of employed 15 to 64 year-olds with more than one job rose from 5% to 7% (Table 1).<sup>12</sup> By 1994, close to one million (944,000) working-age Canadians were holding two or more jobs.

In 1989, few age and sex differences were apparent among multiple jobholders, with the exception of lower rates among 45 to 54 year-old women and 15 to 24 year-old men. But by 1994, women in all age groups – particularly those aged 15 to 24 – had higher rates of multiple jobholding. In fact, one in eight (124,000) women in this age group reported more than one job in 1994.

Table 1  
Non-standard employment by age and sex

	Total employment		Part-time		Temporary *		Multiple jobholders		Own account **	
	1989	1994	1989	1994	1989	1994	1989	1994	1989	1994
'000										
<b>Both sexes</b>	<b>12,468</b>	<b>12,799</b>	<b>1,905</b>	<b>1,972</b>	<b>799</b>	<b>970</b>	<b>635</b>	<b>944</b>	<b>858</b>	<b>1,147</b>
Women	5,535	5,764	1,400	1,379	408	433	302	486	327	486
15-24	1,091	923	437	425	136	152	66	124	31	--
25-34	1,654	1,555	332	258	110	116	98	126	84	118
35-44	1,427	1,700	327	360	98	82	89	140	108	148
45-54	906	1,147	193	209	45	70	26	65	69	151
55-64	457	439	111	126	--	--	--	30	35	48
Men	6,933	7,035	505	593	391	537	333	458	531	661
15-24	1,151	1,043	352	380	151	161	48	73	57	51
25-34	2,057	1,952	72	87	112	177	104	142	126	156
35-44	1,805	1,913	--	54	52	110	86	126	154	193
45-54	1,183	1,473	--	32	27	62	73	72	117	133
55-64	736	654	36	40	48	27	--	45	77	128
% of total employment †										
<b>Both sexes</b>	<b>100</b>	<b>100</b>	<b>15</b>	<b>15</b>	<b>8</b>	<b>9</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>9</b>
Women	100	100	25	24	8	8	5	8	6	8
15-24	100	100	40	46	13	17	6	13	3	--
25-34	100	100	20	17	7	8	6	8	5	8
35-44	100	100	23	21	8	6	6	8	8	9
45-54	100	100	21	18	6	7	3	6	8	13
55-64	100	100	24	29	--	--	--	7	8	11
Men	100	100	7	8	7	9	5	7	8	9
15-24	100	100	31	36	14	16	4	7	5	5
25-34	100	100	4	4	6	10	5	7	6	8
35-44	100	100	--	3	4	7	5	7	9	10
45-54	100	100	--	2	3	5	6	5	10	9
55-64	100	100	5	6	9	6	--	7	10	20

Source: General Social Survey (Cycles 4 and 9)

\* Excludes the self-employed.

\*\* Self-employed workers without paid employees.

† For temporary workers, this calculation excludes the self-employed.

Many of them were probably holding two (or more) part-time jobs, given that the part-time employment rate for 15 to 24 year-olds was very high (46%).

The highest rate of multiple jobholding in 1989 (10%) was found among workers employed in other consumer services (Table 2). In 1994, the highest rates were in retail trade and social services (both 10%). These trends indicate that pressures or enticements to take a second job are no longer restricted to those employed in the lower tiers of the labour market.

### Own-account self-employment

In 1989, 7% of 15 to 64 year-old workers were self-employed on their own account (that is, they had no paid employees). A similar proportion were employers (with one or more paid employees). By 1994, the proportion of employers had declined marginally (to 6%), while that of own-account workers had increased (to 9%), continuing a long-term trend (Crompton, 1993). In 1994, well over one million working-age Canadians were "their own boss," without the additional help of employees.

As in 1989, men in 1994 were still more likely than women to work on their own account, but only slightly so (9% of working men versus 8% of working women). In fact, among 45 to 54 year-old workers, the proportion who were self-employed without paid help was higher for women (13%) than for men (9%). In contrast, 20% of employed men aged 55 to 64 were own-account workers (up from 10% in 1989), compared with only 11% of women this age (up from 8%).



Table 2  
Non-standard employment among 15 to 64 year-olds by industry \*

	Total employment		Part-time		Temporary **		Multiple jobholders		Own account ***	
	1989	1994	1989	1994	1989	1994	1989	1994	1989	1994
	'000									
<b>All industries †</b>	<b>12,468</b>	<b>12,799</b>	<b>1,905</b>	<b>1,972</b>	<b>799</b>	<b>970</b>	<b>635</b>	<b>944</b>	<b>858</b>	<b>1,147</b>
Agriculture	278	369	--	50	--	--	--	--	124	190
Natural resource-based	818	759	--	--	28	58	--	--	--	--
Manufacturing	1,779	1,560	71	62	73	90	88	75	39	32
Construction	626	671	35	52	69	95	--	58	81	151
Distributive services	1,326	1,366	89	105	50	72	54	75	86	120
Business services	1,337	1,556	135	179	52	78	78	107	123	229
Social services	2,050	2,317	484	521	184	273	143	225	77	86
Public administration	1,124	908	74	47	90	99	41	54	--	--
Retail trade	1,628	1,613	515	472	88	52	59	160	117	91
Other consumer services	1,337	1,584	424	456	136	128	130	124	152	219
	% of total employment ††									
<b>All industries</b>	<b>100</b>	<b>100</b>	<b>15</b>	<b>15</b>	<b>8</b>	<b>9</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>9</b>
Agriculture	100	100	--	14	--	--	--	--	45	51
Natural resource-based	100	100	--	--	4	8	--	--	--	--
Manufacturing	100	100	4	4	4	6	5	5	2	2
Construction	100	100	6	8	17	22	--	9	13	23
Distributive services	100	100	7	8	4	6	4	5	6	9
Business services	100	100	10	12	5	6	6	7	9	15
Social services	100	100	24	22	10	13	7	10	4	4
Public administration	100	100	7	5	8	11	4	6	--	--
Retail trade	100	100	32	29	7	4	4	10	7	6
Other consumer services	100	100	32	29	13	11	10	8	11	14

Source: General Social Survey (Cycles 4 and 9)

\* For industry inclusions see Methodology and definitions.

\*\* Excludes the self-employed.

\*\*\* Self-employed workers without paid employees.

† Includes workers who did not state their industry of employment.

†† For temporary workers, this calculation excludes the self-employed.

Own-account self-employment continues to be the preserve of older workers, perhaps because they have more of the experience, skills, capital, and contacts required to succeed in their own business. In some cases, older displaced workers may have more difficulty than younger individuals in finding paid employment, with self-employment the only alternative.

As expected, own-account self-employment was very high in agriculture (51% in 1994, Table 2). Almost one in four (23%) workers in the construction industry were in

this category, along with 15% of those working in the upper-tier business services and 14% of workers in the lower-tier consumer services. With the exception of consumer services, where large numbers of young workers are employed, this industry pattern generally mirrors the age-distribution of self-employment described earlier. The largest increases in own-account workers between 1989 and 1994 occurred in construction and in business services, sectors where it might be easier (compared with manufacturing or social services, for example) to start a business.

## Temporary or contract work

The analysis of temporary or contract work is restricted to employees (85% of all working 15 to 64 year-olds), because the concept of a temporary job is not particularly meaningful for the self-employed. In 1989, 8% of employees (799,000) identified themselves as temporary workers (in a job with a specified end-date). By 1994, almost one million (970,000) or 9% of all 15 to 64 year-old employees were in temporary or contract positions.<sup>13</sup>

Younger employees were more likely than middle-aged or older

employees to be in temporary or contract jobs in 1989 or 1994, but this age pattern became more pronounced over the five-year period. By 1994, roughly one in six employees aged 15 to 24 (17% of women and 16% of men) were in limited-term jobs. In contrast, only 5% to 7% of both women and men aged 35 or older held temporary or contract positions.

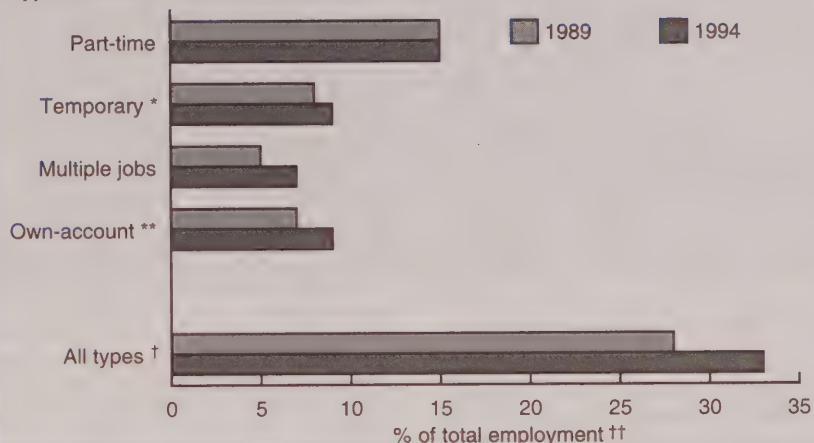
In both years examined, low rates of temporary employment were found in manufacturing, distributive services and business services. In contrast, high rates were seen for employees in construction (over one in five employees in 1994), social services, and other consumer services, as well as public administration.

The relatively high rates of temporary employment in social services (13% in 1994) and public administration (11%) are noteworthy. Together, these two non-market sectors accounted for 30% of

Chart B

### Most types of non-standard work are on the rise.

#### Type of work



Source: General Social Survey

\* Employees only (excludes self-employed).

\*\* Self-employed without paid employees.

† Persons in more than one category are counted only once.

†† For temporary workers, this calculation excludes the self-employed.

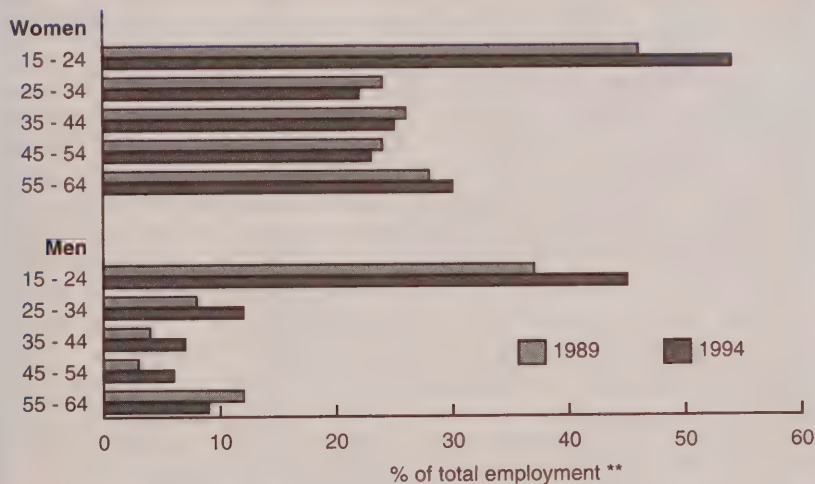
all employees aged 15 to 64 but 38% of all temporary or contract workers. The public sector appears to have become more reliant on this form of non-standard work.

### Varieties of non-standard work

Four types of non-standard work have been examined in this study. However, they are not mutually exclusive. For example, many part-time workers are in temporary jobs. With overlaps taken into account, 33% of 15 to 64 year-olds who were employed in 1994 (at the time the survey was carried out) were engaged in at least one of the four types of non-standard work, up from 28% in 1989 (Chart B). A more restrictive definition of non-standard work that includes only part-time and temporary work still leaves 21% of 15 to 64 year-old workers in non-standard employment in 1994, compared with 19% in 1989.

Chart C

### Young workers have experienced the greatest growth in part-time and/or temporary work.\*



Source: General Social Survey

\* The narrow definition of non-standard work.

\*\* For temporary workers, this calculation excludes the self-employed.



## The international scene

The increase in non-standard work is not unique to Canada: employers in other industrialized countries have also been relying more on non-standard workers, although the definitions, patterns and rates may vary. For example, part-time rates have already exceeded 30% in the Netherlands, 25% in Norway, 20% in Australia, Denmark, New Zealand and Great Britain, and they approach 20% in the United States.<sup>14</sup> In Japan, Denmark and Portugal, rates of temporary employment had risen above 10% by

the late 1980s (Piotet, 1988; Brodsky, 1994). Compared with Great Britain, higher proportions of young workers hold non-standard jobs in Canada. In turn, British women are much more likely than their Canadian counterparts to be in non-standard jobs (Green, Krahn and Sung, 1993). These trends are the result of strategic choices by both employers and workers, many of whom appear to have accepted non-standard work involuntarily.<sup>15</sup>

time or temporarily. Rates of non-standard work increased for the youngest and oldest age groups,

but declined marginally for women aged 25 to 54. Among men, in contrast, the overall proportion working part time or temporarily rose from 11% to 14%, with increases in all but the oldest age group.

Under the broader definition, which includes multiple jobholders and own-account self-employed workers, agriculture led the other industries in providing non-standard employment in both 1989 and 1994. The narrower definition places agriculture in the middle of the industry ranking, leaving the lower-tier services (retail trade and other consumer services) and the upper-tier social services at the top of the list.

Whatever the measurement used, in 1994 youths were over-represented among non-standard workers, even more than they had been in 1989. Under the broader definition, the proportion of 15 to 24 year-old women in non-standard employment jumped from 49% to 64% in the five years. The equivalent increase for young men was 41% to 52% (Table 3). More strictly defined, the rate of non-standard work for young women rose from 46% to 54%, compared with 37% to 45% for young men (Chart C).

As might be expected, students are more likely to have non-standard employment (60% and 51% using the broader and narrower definitions, respectively). However, significant numbers of non-students also have non-standard work arrangements. In 1994, 29% of 15 to 64 year-old employed non-students were engaged in broadly defined non-standard work and 16% had part-time and/or temporary work.

Under both definitions and in all age categories examined, women reported higher rates of non-standard work than men in 1989 as well as 1994. However, based on the more restrictive definition, the female-male difference shrank over the five-year period. In both years, 29% of 15 to 64 year-old women were employed either part

Table 3  
**Combinations of non-standard employment by age, sex and industry**

	Definition 1 *		Definition 2 **	
	1989	1994	1989	1994
	% of total employment †			
<b>Total</b>	<b>28</b>	<b>33</b>	<b>19</b>	<b>21</b>
Women	35	40	29	29
15-24	49	64	46	54
25-34	30	33	24	22
35-44	35	37	26	25
45-54	31	35	24	23
55-64	35	41	28	30
Men	22	27	11	14
15-24	41	52	37	45
25-34	18	25	8	12
35-44	16	22	4	7
45-54	19	19	3	6
55-64	22	30	12	9
Industry ††				
Agriculture	54	65	9	19
Natural resource-based	10	14	6	10
Manufacturing	13	14	8	9
Construction	28	45	16	20
Distributive services	19	23	10	11
Business services	24	33	12	15
Social services	35	39	28	30
Public administration	16	21	13	16
Retail trade	40	42	34	31
Other consumer services	48	47	36	32

Source: General Social Survey (Cycles 4 and 9)

\* One or more of part-time work, temporary work, own-account self-employment, or multiple jobholding (people in more than one category are counted only once).

\*\* Part-time and/or temporary work only (people in both categories are counted only once).

† For temporary workers, this calculation excludes the self-employed.

†† For industry inclusions see Methodology and definitions.

## Conclusion

Non-standard work has become more common in Canada as well as in other industrialized nations (see *The international scene*). Although the majority of Canadian workers are still employed in one full-time permanent paid job, the rates of part-time work, temporary work, own-account self-employment and multiple jobholding all increased between 1989 and 1994. While non-standard employment in 1989 was already widespread in social services, retail trade and other consumer services, by 1994 it had also become more prevalent in the goods-producing sector and the remaining service industries.

Women are much more likely than men to have non-standard employment. But as part-time and temporary work arrangements have spread, the proportion of men with such employment has risen, thus narrowing the difference between the sexes.

Rates of non-standard work have increased most, however, for young workers, whose labour force participation rates have fallen. Furthermore, their wages have continued to deteriorate relative to those of older workers.<sup>16</sup>

In 1989, the Canadian economy was relatively strong but about to slip into a serious and long recession. By 1994, the recession had ended, unemployment rates were falling, and total employment had finally exceeded the level reached in 1990. However, if previous patterns of change in various forms of non-standard work can be taken as a guide – for example, part-time rates remaining around 15% throughout the strong-growth years of the 1980s – non-standard work is unlikely to decline in the next few years despite improvements in the economy. □

## Notes

1 Refers to self-employed workers who do not have paid help.

2 See Pinfield and Atkinson (1988), Pollert (1988), Polivka and Nardone (1989), Stoffman (1991), Tilly (1991), Betcherman et al. (1994:48) and Brodsky (1994).

3 See Sunter (1992), Crompton (1993) and Logan (1994). Logan notes that some voluntary part-time workers may be unavailable for full-time work because of family responsibilities, illness or injury. Duffy and Pupo (1992) suggest that many young mothers working part time voluntarily might prefer full-time employment if they had access to quality child care and/or if fathers took on more family responsibilities.

4 See the Economic Council of Canada (1990) on non-standard work and labour market inequality in Canada. In an analysis of data from the United States, Polivka and Nardone (1989) used the term "contingent work" to emphasize the employment insecurity of some forms of non-standard work. Brown and Scase (1991) talk about "poor work" when commenting on non-standard work trends in the United Kingdom.

5 See Krahn (1991) for a discussion of non-standard work (based on Cycle 4 data) that also includes an analysis of part-year work (typically, nine months or less annually in the main job). Since Cycle 9 did not collect information on part-year work, comparisons over time of this form of non-standard work are not possible.

In their analyses of data from the 1991 Survey of Work Arrangements, both Sunter (1993) and Galarneau (1994) use the term "non-standard" to describe shiftwork, since weekday "9 to 5" jobs have been the typical employment schedule. Non-standard work arrangements, including shiftwork, are also described in Siroonian (1993). However, because questions about shiftwork were included in Cycle 9 but not in Cycle 4, this form of non-standard work is not examined here.

6 Cycle 4 data were collected in January and February of 1989, while Cycle 9 data were collected throughout 1994. Because of seasonal variations in employment arrangements, this methodological difference may have some effect on the 1989-94 trends discussed in this paper.

7 Both own-account workers and employers may have unpaid family workers helping in the family business, farm or professional practice.

8 See Krahn (1992) and Krahn and Lowe (1993: 69-72) for a discussion of this industrial classification system. This typology resembles the Economic Council of Canada's (1990) classification scheme that separates the goods-producing sector from "dynamic services" (distributive and business services), "traditional services" (retail trade and other consumer services), and "non-market services" (education, health and welfare, and public administration).

9 The proportion of full-time employees working long hours (50 or more per week) has also increased over the years (Cohen, 1992). These trends indicate a polarization of employment in terms of hours worked. Furthermore, since individuals working long hours tend to be better educated and typically report higher incomes, whereas part-time workers are generally among the less well paid, these two trends highlight a slow increase in earnings inequality. See Morissette, Myles and Picot (1993) and Sunter and Morissette (1994) on trends in hours worked by Canadians.

10 The 1989 and 1994 GSS estimates of part-time employment among 15 to 64 year-olds in Table 1 are both 15% and so do not reflect this most recent increase seen in LFS data. In 1989, only 0.3% of employed 15 to 64 year-old GSS respondents failed to provide information on their full-time/part-time status. By 1994, this figure had risen to 1.8%. This difference may partly account for the lower-than-expected 1994 GSS part-time estimate.

11 Williams (1995) reports a moderate increase in men's part-time rates in the United States between 1982 and 1990, but a significant decline in women's part-time rates. Nevertheless, in the United States, as in Canada, the part-time rate is still considerably higher among women than men.

12 Cohen (1994) reports a somewhat lower rate of multiple jobholding (5.1%), perhaps because the 1993 Labour Force Survey estimate includes all employed individuals aged 15 and over, as opposed to the 1994 GSS estimate, which excludes workers over 64. In contrast, the 1989 multiple jobholding rate in the United States was 6.2% (Stinson, 1990).

13 The 1991 Survey of Work Arrangements (SWA) estimated that 5% of employees aged 15 to 64 were in temporary jobs (Siroonian, 1993). The difference may be due to the SWA's six-month cut-off, compared with the GSS, which counted any job with a specific end-date as a temporary job.

14 See Tilly (1991) for part-time trends in the United States, and Kmitch (1994) for rates in other industrialized countries.



15 See Kmitch (1994) on legislative protection for part-time workers, Brodsky (1994) on some of the social costs of increased reliance on non-standard workers, and Feldman, Doeringhaus and Turnley (1994) on the costs and challenges of managing temporary workers.

16 See Morissette, Myles and Picot (1993) on the growing wage gap between younger and older workers, and Sunter (1994) on the declining labour force participation among youths.

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# What's new?

## ■ JUST RELEASED

### ■ *1996 Census questions address unpaid work*

The 1996 Census of Population will be held on Tuesday, May 14, 1996. Among new questions added to the long form questionnaire are one on the main type of transportation used to get to work, and another on the hours spent in the week preceding the census on unpaid activities (such as housework, yard work, home maintenance, child care and elder care).

Apart from these changes, the questions on paid employment and income are the same as those asked in previous censuses. Data will be collected on hours worked, absences from work, industry and occupation, class of worker, incorporation status if self-employed, place of work, number of weeks worked in 1995, and whether that work was full-time or part-time.

Also of interest to *Perspectives* readers are the data to be collected on visible minorities. In the past, members of visible minority population groups were identified indirectly via the amalgamation of the census questions on place of birth and ethnic origin; in 1996 respondents will be asked directly if they are White, Chinese, South Asian, Black, Arab/West Asian, Filipino, South East Asian, Latin-American, Japanese, Korean, or of multiple heritage. Although not a labour market or income characteristic, the visible minority information is valuable in employment equity analysis. □

### ■ *Employment equity to 2016*

Population projections are now available for all four federally legislated employment equity target groups, with the release of two reports dealing with visible minorities and persons with disabilities. The projections are carried up to the year 2016, based on the 1991 Census and the 1993 postcensal estimates. (See "What's new?" Autumn 1995, for details about projections for women and Aboriginal peoples.)

*Projections of Persons with Disabilities at Work, Canada, Provinces and Territories, 1993-2016* (Catalogue 91-538OXPE) provides estimates by sex and five-year age groups for every year from 1993 to 2016. The projections are based on the assumption that disability rates for the working-age population match those derived from the 1991 Health and Activity Limitation Survey, and that any growth in the number of

persons with disabilities is caused solely by demographic change. The projections estimate that the number of working-age persons with disabilities will grow from 1.4 million in 1993 to 2.0 million by 2016, with annual average growth rates exceeding those of the population without disabilities. The geographic distribution will remain fairly stable for most provinces except Ontario, Quebec and British Columbia; Ontario will record the greatest increase in working-age residents with disabilities, and Quebec, the smallest.

*Projections of Visible Minority Population Groups for Canada, Provinces/Territories and Regions, 1991 to 2016* (Catalogue 91-541OXPE) presents estimates for eight visible minority groups: Chinese, Blacks, South Asians, Arabs and West Asians, Other Asians (Koreans, Japanese, South East Asians), Pacific Islanders (Filipinos and other Pacific Islanders), Latin-Americans, and multiple visibility minorities. Variables include age, sex, provincial distribution, fertility and mortality rates, and immigration and emigration. Depending upon which of the three projection scenarios – low, medium or high growth – proves most accurate, the report estimates that the visible minority population will increase from 2.7 million in 1991 to between 7.0 million (low growth) and 7.5 million (high growth) by 2016. The reasons for this rapid increase are the high levels of recent immigration, the relatively high fertility and slightly better life expectancy of the visible minority population, compared with the national average. Most of the visible minority population will continue to live in Ontario, Quebec, British Columbia and Alberta. Under the medium-growth projection, the largest visible minority will continue to be Chinese, followed by Blacks, South Asians, and Arabs and West Asians.

For more information, or to order, contact the Employment Equity Data Program at (613) 951-9291; or fax (613) 951-0387. □

### ■ *Life tables for actuaries and other professionals*

*Life Tables, Canada and Provinces, 1990-1992* has recently been published. The life tables, which are revised every five years, show the expected longevity of a population, based on the assumption that a hypothetical cohort of 100,000 individuals born at the same moment will experience the same age- and sex-specific mortality rates as those observed in the actual population over a specified period.



The new life tables for Canada and the provinces are based on 1991 Census population counts and mortality rates prevailing from 1990 to 1992. Several variations of the basic tables are presented:

- life tables for the first year of life for each sex, Canada;
- detailed life tables by single year of age for males and females, Canada and the provinces (except Prince Edward Island);
- abridged life tables using five-year age intervals for males, females and both sexes combined, Canada and the provinces (including Prince Edward Island).

Life tables were not constructed for Yukon or Northwest Territories because of their small populations, but the two territories are included in the calculations at the Canada level.

The life tables present the following information for each age interval (single years in the detailed tables and five-year intervals in the abridged tables):

- *Number surviving*: number of persons in the hypothetical cohort of 100,000 surviving to the exact age listed (for example, 93,325 males survive to age 50)
- *Number dying*: the number dying in each successive age interval out of the number alive at the beginning of the age interval (419 men who live to age 50 will die before they reach age 51)
- *Probability of surviving*: proportion of people alive at the beginning of an age interval who will survive to the beginning of the next (over 99.5% of 50 year-old men will survive to age 51)
- *Probability of dying*: proportion of people alive at the beginning of an age interval who will die before the beginning of the next (under 0.5% of 50 year-old men will die before reaching age 51)
- *Stationary population*: number of persons in the cohort who will survive at least another half interval (93,115 men will survive to age 50 years and 6 months)
- *Cumulative stationary population*: total years of life remaining to the stationary population if all its members survive to the highest age in the life table (almost 2.6 million years of life remain to the stationary population of 50 year-old men)
- *Average remaining years of life*: the average number of years remaining to the surviving cohort members in an age interval, given a specific set of mortality rates (on average, 50 year-old men can expect to live another 27.65 years)

*Life Tables, Canada and Provinces, 1990-1992* is available in hard copy (Catalogue 84-537) or on diskette (ASCII format). Both are priced at \$40. □

### ■ **Analytical Studies Branch considers limitations of current research**

*Divergent Inequalities – Theory, Empirical Results and Prescriptions*

M.C. Wolfson

Research Paper Series No. 66

The issue of income inequality has been central to public policy discussions for many years. But recent research has been accompanied by a somewhat undisciplined approach to the statistical methods used to analyze income trends. The author argues that widely used summary statistical indicators of inequality are potentially misleading, resulting occasionally in conclusions not supported by the evidence. He identifies several major sources of divergence between evidence cited and conclusions claimed: the fundamental meaning of income inequality; the particular statistical measures, populations and income definitions employed; and the measures commonly used to support claims of trends in income inequality. For all cases, the author provides examples using Canadian labour income data over the period 1967 to 1991.

*Selection versus Evolutionary Adaptation: Learning and Post-entry Performance*

J.R. Baldwin and M. Rafiquzzaman

Research Paper Series No. 72

This paper examines the maturation process of firms that enter an industry by constructing a new plant (greenfield entrants). The data are drawn from a longitudinal file constructed from the Census of Manufactures and cover the years 1970 to 1989; entry cohorts from 1971 to 1982 were tracked over time (1982 was chosen as the end point to ensure a sufficient number of years to produce meaningful results).

The paper first describes changes in the relative size, wages, productivity and profitability of greenfield entrants; it then concentrates on the characteristics related to successful growth, focusing on the extent to which a cohort's growth is due to "selection" and how much to the "evolutionary learning" that allows new entrants to improve their performance relative to incumbent firms. ("Selection" refers to the survival of more efficient entrants with lower costs, better products and higher profits than other firms; "evolutionary learning" refers to a new firm's capacity to overcome its relative disadvantage by applying new skills.) Finally, the authors estimate a model of entry that takes into account both selection and evolutionary learning.

Among the authors' findings are the following:

- On average, 6.7% of the establishments in the manufacturing sector each year are greenfield entrants; only 51% of such entrants will survive for 10 years. These survivors account for over two-thirds of the entry cohort's production output during the first year of existence, indicating that smaller entrants tend to die off.
- The low wages entrants pay their employees are offset by lower productivity, implying that entrants experience a labour cost disadvantage compared with incumbents. This disadvantage gradually disappears over time, as the productivity of entrants increases three times faster than relative wage rates.
- Although the productivity and wages of entrants lag considerably behind incumbents', profitability does not. At birth, the profitability of entrants is only 10% below that of incumbents; after 10 years, it is the same as the incumbent level.
- Both "selection" and "evolutionary learning" are related to post-entry performance: selection is more closely related to basic survival (being an efficient firm), and evolutionary learning more related to growth (overcoming relative disadvantages). Nevertheless, selection is also an important contributor to the overall growth of a cohort's average productivity, wage rates and plant size.
- The analysis suggests that evolutionary learning may be a function of necessity: where a greater cost disadvantage exists between entrants and incumbents, there is greater post-entry learning and growth of surviving entrants.

*The Missing Link – Data on the Demand Side of Labour Markets*

L. Osberg

Research Paper Series No. 77

This paper discusses the constraints imposed on labour economics by existing data collection methods. Since most current labour market surveys focus on the decision-making behaviour of households (the supply side of the labour market), analysts possess very little information about employer behaviour (the demand side of the labour market), which can only be inferred from respondents' perceptions. Studies of many labour market issues would benefit from a focus on the demand side – for example, hiring strategies, "reservation wages" of unemployed workers, response of the labour market to "technology shocks," demand for skills, reasons for not providing training, and the effect of "contracting out" on the social welfare system as contingent workers turn to UI and social assistance during off-peak periods.

The author argues that the effect of limiting data collection to one side of the labour market is considerable and far-reaching: research inevitably shifts to the set of hypotheses that are testable (that is, for which data are available). Consequently, public policy debate, policy design and its implementation reflect the biases of data collection to some extent. The paper suggests types of data that might be collected and alternative methodologies for an establishment/worker survey; it also discusses some of the theoretical and empirical difficulties that might be encountered in such an exercise.

*Human Capital and the Use of Time*

F. Jones

Research Paper Series No. 79

Analysis of the benefits and costs of investment in human capital is considerably enhanced by the inclusion of time-use data. Such information expands the discussion of key issues because it offers a set of integrated information not only on educational attainment, but also on the amount of time devoted to formal and informal study, to paid and unpaid work of economic value, to volunteer work, to leisure activities, and to the education of children by parents.

The author shows that investing in human capital yields benefits to society that increase with the level of educational attainment. These benefits include paid work, work of civic value, and child care. As one would expect, the costs of human capital investment include a reduction in the time spent in both leisure and work activities as study time increases. The quantity of work given up, however, is never as great as the quantity of time devoted to study.

To order studies in the *Research Paper Series*, contact your nearest Statistics Canada Reference Centre, or write to Publications Review Committee, Analytical Studies Branch, Statistics Canada, 24th Floor, R.H. Coats Building, Ottawa, Ontario K1A 0T6. Or phone (613) 951-1804. □

## ■ WHAT'S NEW WITH SLID?

### ■ *First year of SLID data on microdata file*

The first full year of labour market and income data from the Survey of Labour and Income Dynamics (SLID) will soon be available on a microdata file. The file will contain results of the interviews conducted in January and May 1994 with the 15,000 households in the first panel of the sample, as well as benchmark data on



household membership, basic demographics and labour force activity collected during the preliminary interview in January 1993. (With the integration of the second panel in January 1997, SLID will cover about 30,000 households.)

The labour market variables to be contained in the microdata file include labour force status each week of the year, number of employers over the course of the year (up to a maximum of six), industry and occupation (up to three jobs), earnings and hours worked, use of flexible work arrangements, pensions, and union membership. Income variables include wages and salaries, self-employment income, investment income, government transfer payments (unemployment and social assistance), tax credits, pension income, and child support payments. (For more information about SLID methodology and coverage, see "What's new?" Spring 1994 and Summer 1994.)

Although SLID's principal value lies in its longitudinal nature, the data will support a wide variety of cross-sectional analyses. Listed below are the seven major research themes that have been used to guide the development and design of the output files:

- *Demographics*: for example, identification of blended and multi-generational families
- *Dynamics of low income*: duration of spells of low income and factors related to income level changes
- *Educational activity*: analyzed in the context of the student's other activities and family circumstances
- *Employment and unemployment dynamics*: job turnover by industry and occupation, spells of unemployment experienced by the same individuals, and events that precede a transition into self-employment
- *Family economic mobility*: stability of family income, and determinants of improvement or deterioration in income over time (for example, the effect of divorce or remarriage on financial well-being)
- *Job quality*: underemployment, occupational mobility, earnings growth over time, and polarization of earnings and hours in the workforce
- *Labour market transitions*: from school to work, from work to child care, and from work to retirement

For readers interested in published analytical work, *Dynamics of Labour and Income: 1994 Report* introduces some of the benchmark data collected during the preliminary SLID interview, and illustrates the scope and level of analysis that this segment of the survey can

support. Among the topics covered in the five analytical articles are the male-female wage gap, work experience, and intergenerational change in educational attainment. (For highlights, see "What's new?" Summer 1995.) Regular reports on SLID products, services and research activities are published in the quarterly newsletter, *Dynamics*.

For further information about the Survey of Labour and Income Dynamics (SLID) microdata file, other SLID products, or a subscription to *Dynamics*, contact Philip Giles at (613) 951-2891; or fax (613) 951-3253. □

### ■ **Majority of SLID households opt for new collection method**

SLID respondents now have the option of reporting income through their tax records instead of a telephone interview. The benefits of using Revenue Canada tax files include lower survey costs, reduced respondent burden, and higher quality data (since tax file data generally have fewer omissions and underestimates). The switch has required changes to some income categories to ensure consistency with Revenue Canada definitions.

So far, 63% of respondents have chosen to permit access to their tax records. Respondents who do not file tax returns (for example, teenagers with very small incomes), or who prefer to give their income information in an interview, will continue to be interviewed each May.

Readers interested in this approach to income collection can order SLID Research Paper No. 94-11, *The Use of Tax File Data in the Survey of Labour and Income Dynamics: Summary Report*. See the May 1995 issue of *Dynamics* for details about changes in income categories. For more information, contact Philip Giles at (613) 951-2891; or fax (613) 951-3253. □

## ■ **NEW SURVEY**

### ■ **November 1995: Survey of Work Arrangements**

This survey used a sample of about 29,000 households to measure the prevalence of non-standard work arrangements among Canada's workers. Non-standard work arrangements include compressed/extended work weeks or weekend work, shift or on-call work, flexitime arrangements, home-based work, and temporary work.

Data were collected on the respondents' principal job. The information gathered identifies the industries and occupations most commonly associated with non-standard arrangements, and includes data on union membership, rates of regular and overtime pay, tips and commissions, and the extent of paid overtime work. Other data include firm size and non-wage benefits such as pensions, medical and dental plan coverage, and sick and vacation leave entitlements. The reasons people work non-traditional hours (for example, whether such hours are required by the employer or are family- or school-related) were also explored.

Data on the number of people holding two or more jobs, and reasons for multiple jobholding, were collected as well. In addition, respondents were asked about the trade-off between work and leisure, that is, whether they would prefer to work more, fewer or the same hours at their current rate of pay. Most of the data will be comparable with those of the 1991 Survey of Work Arrangements.

Preliminary results of the 1995 Survey of Work Arrangements are expected in 1996. For more information, contact Ernest B. Akyeampong at (613) 951-4624, or Elizabeth Majewski at (613) 951-4584. □



# Index: 1989-1995

*This index lists articles published in Perspectives on Labour and Income (75-001E) since its inception (Summer 1989). It is updated once a year and published in the Winter issue.*

## ABSENCE FROM WORK

Missing work	Spring 1995
Absences from work revisited	Spring 1992
Taking their leave	Autumn 1989
On maternity leave	Summer 1989

## CONSUMER SPENDING

Spending patterns of couples without children	Summer 1994
Tracking down discretionary income	Spring 1991
Consumer spending in urban and rural Canada	Autumn 1990
Where the money goes: Spending patterns in Canada and the U.S.	Autumn 1990

## EARNINGS

Women as main wage-earners	Winter 1995
Employment prospects for high school graduates	Autumn 1995
Labour market outcomes for university co-op graduates	Autumn 1995
Recent trends in earnings	Autumn 1995
Adults living solo	Winter 1994
A recession for whom?	Winter 1993
A note on wage trends among unionized workers	Autumn 1993
Seven decades of wage changes	Summer 1993
The changing profile of dual-earner families	Summer 1992
On non-wage labour income	Winter 1991
Are jobs in large firms better jobs?	Autumn 1991
Visible minorities in the Canadian labour force	Summer 1991
Women's earnings and family incomes	Summer 1991
Recent trends in wages	Winter 1990
The price of labour	Autumn 1990
Male-female earnings gap among recent university graduates	Summer 1990
The graduates of '82: Where are they?	Spring 1990
Wives as primary breadwinners	Spring 1990
Working for minimum wage	Winter 1989
Unionization and women in the service sector	Autumn 1989
Bilingualism and earnings	Summer 1989

## EDUCATION AND TRAINING

Employment prospects for high school graduates	Autumn 1995
--	-------------

Labour market outcomes for university co-op graduates	Autumn 1995
Work experience	Summer 1995
A note on the self-initiated training of job-losers	Spring 1994
Employer-supported training – it varies by occupation	Spring 1994
Recent information on training	Spring 1994
Youths – waiting it out	Spring 1994
Labour market outcomes for high school leavers	Winter 1993
School, work and dropping out	Summer 1993
Women in academia – a growing minority	Spring 1993
A degree of change	Winter 1992
Studying on the job	Summer 1992
Juggling school and work	Spring 1992
Lifelong learning: Who goes back to school?	Winter 1991
Apprentices: Graduate and drop-out labour market performances	Spring 1991
Gail Cook Johnson speaks out on human resource issues	Spring 1991
Overview of literacy skills in Canada	Winter 1990
Training the work force: A challenge facing Canada in the '90s	Winter 1990
Male-female earnings gap among recent university graduates	Summer 1990
The graduates of '82: Where are they?	Spring 1990

## FAMILIES

Women as main wage-earners	Winter 1995
Families and moonlighting	Summer 1995
Hours of working couples	Summer 1995
Work and low income	Summer 1995
Adults living solo	Winter 1994
High income families	Winter 1994
Left behind: Lone mothers in the labour market	Summer 1994
Spending patterns of couples without children	Summer 1994
Balancing work and family responsibilities	Spring 1994
Family facts (charts)	Spring 1994
Employed parents and the division of housework	Autumn 1993
Female lone parents in the labour market	Spring 1993
Alimony and child support	Summer 1992
The changing profile of dual-earner families	Summer 1992
Marriage, money and retirement	Winter 1991
Family income inequality in the 1980s	Autumn 1991
Who's looking after the kids? Child care arrangements of working mothers	Summer 1991

Women's earnings and family incomes	Summer 1991
Tracking down discretionary income	Spring 1991
Government transfer payments and family income	Autumn 1990
Where the money goes: Spending patterns in Canada and the U.S.	Autumn 1990
Work and relative poverty	Summer 1990
Wives as primary breadwinners	Spring 1990

## HEALTH

Tired workers	Summer 1995
Perceptions of workplace hazards	Spring 1994
Defining and measuring employment equity	Winter 1993
Back injuries at work, 1982-1990	Autumn 1992
Under the influence	Autumn 1990
Disabled workers	Winter 1989

## HIGH TECHNOLOGY

Computers in the workplace	Summer 1991
Measuring Canada's international competitiveness	Summer 1990
High technology at work	Spring 1990

## IMMIGRANTS

Canada's newest workers	Spring 1995
Defining and measuring employment equity	Winter 1993
The census: One hundred years ago	Summer 1991
Visible minorities in the Canadian labour force	Summer 1991
Gail Cook Johnson speaks out on human resource issues	Spring 1991
Immigrants in product fabricating	Winter 1989

## INCOME

Men retiring early: How are they doing?	Winter 1995
Work and low income	Summer 1995
High income families	Winter 1994
Who gets UI?	Summer 1994
Income facts (charts)	Autumn 1993
Investment income of Canadians	Summer 1993
Facing retirement	Spring 1993
Alimony and child support	Summer 1992
Hard at work	Spring 1992
Family income inequality in the 1980s	Autumn 1991
Dependence on government transfer payments, 1971-1989	Summer 1991
Women's earnings and family incomes	Summer 1991
Work and relative poverty	Summer 1990

## INDUSTRY STUDIES

Recent trends in earnings	Autumn 1995
Hiring difficulties in manufacturing	Summer 1995
Missing work	Spring 1995
The horseless carriage	Spring 1995
Three large urban areas in transition	Winter 1994
A recession for whom?	Winter 1993

A note on tracking employment in manufacturing	Summer 1993
International employment trends by industry – a note	Summer 1993
The renaissance of self-employment	Summer 1993
Are single-industry towns diversifying?	Spring 1992
A look at fishing, mining and wood-based communities	
Immigrants in product fabricating	Winter 1989
The Canadian auto industry, 1978-1986	Autumn 1989

## INSERTS (CHARTS)

Greying of the workforce	Winter 1994
International facts	Summer 1994
Family facts	Spring 1994
Key labour and income facts	Winter 1993
Income facts	Autumn 1993
Census facts	Summer 1993

## INTERNATIONAL COMPARISONS

International facts (charts)	Summer 1994
International employment trends by industry – a note	Summer 1993
Gail Cook Johnson speaks out on human resource issues	Spring 1991
Labour force participation: An international comparison	Winter 1990
Training the work force: A challenge facing Canada in the '90s	Winter 1990
Where the money goes: Spending patterns in Canada and the U.S.	Autumn 1990
Dependency ratios: An international comparison	Summer 1990
Measuring Canada's international competitiveness	Summer 1990
The distribution of wealth in Canada and the United States	Spring 1990

## INTERVIEWS

David Foot discusses career paths	Winter 1994
An interview with Laurence E. Coward	Winter 1993
Dian Cohen on the new economy	Summer 1993
Gail Cook Johnson speaks out on human resource issues	Spring 1991

## LABOUR MARKET

The labour market: Mid-year review	Every Autumn
The labour market: Year-end review	Every Spring
Greying of the workforce	Spring 1995
Dian Cohen on the new economy	Summer 1993
Job ads: A leading indicator?	Autumn 1989

## LABOUR TURNOVER/MOBILITY

Hiring difficulties in manufacturing	Summer 1995
Job-related moves	Winter 1992
Staying put: Job tenure among paid workers	Winter 1992



Workers on the move: Permanent layoffs	Autumn 1992
Workers on the move: Quits	Autumn 1992
Workers on the move: An overview of labour turnover	Summer 1992
Workers on the move: Hirings	Summer 1992

## LANGUAGE AND LITERACY

Literacy in the workplace	Spring 1992
Gail Cook Johnson speaks out on human resource issues	Spring 1991
Overview of literacy skills in Canada	Winter 1990
Training the work force: A challenge facing Canada in the '90s	Winter 1990
Immigrants in product fabricating	Winter 1989
Bilingualism and earnings	Summer 1989

## OCCUPATION STUDIES

Women in non-traditional occupations	Autumn 1995
Employer-supported training – it varies by occupation	Spring 1994
Unemployment – occupation makes a difference	Winter 1991
Trading places: Men and women in non-traditional occupations, 1971-86	Summer 1990

## PENSIONS AND RETIREMENT

Men retiring early: How are they doing?	Winter 1995
RRSPs – unused opportunities	Winter 1995
Tax assistance for pensions and RRSPs	Winter 1995
Who's saving for retirement?	Winter 1995
Pension plan potpourri	Summer 1995
Greying of the workforce	Spring 1995
Update on RRSP contributions	Spring 1995
Greying of the workforce (charts)	Winter 1994
RRSP withdrawals	Spring 1994
A note on the recession and early retirement	Winter 1993
An interview with Laurence E. Coward	Winter 1993
RRSPs – new rules, new growth	Winter 1993
C/QPP costs and private pensions	Autumn 1993
Facing retirement	Spring 1993
Note on RRSP contributions and payouts	Spring 1993
Employer-sponsored pension plans – who is covered?	Winter 1992
RRSPs – not just for retirement	Winter 1992
Marriage, money and retirement	Winter 1991
On non-wage labour income	Winter 1991
Women and RRSPs	Winter 1991
Are jobs in large firms better jobs?	Autumn 1991
Retirement attitudes, plans and behaviour	Autumn 1991
The pension carrot: Incentives to early retirement	Autumn 1991
Women approaching retirement	Autumn 1991
Dependence on government transfer payments, 1971-1989	Summer 1991
RRSPs: Tax-assisted retirement savings	Winter 1990

Taxes, transfers and regional disparities	Winter 1990
Government transfer payments and family income	Autumn 1990
The performance of trustee pension funds	Spring 1990

## PRODUCTIVITY

Measuring productivity	Spring 1995
About productivity	Spring 1993

## REGIONAL STUDIES

Full-year employment across the country	Autumn 1995
Are single-industry towns diversifying?	Spring 1992
A look at fishing, mining and wood-based communities	
Visible minorities in the Canadian labour force	Summer 1991
Taxes, transfers and regional disparities	Winter 1990
Consumer spending in urban and rural Canada	Autumn 1990
Shifting patterns of unemployment distribution since the 1960s	Autumn 1990
Bilingualism and earnings	Summer 1989
Canada's unemployment mosaic	Summer 1989

## TAXES

Family income inequality in the 1980s	Autumn 1991
Taxes, transfers and regional disparities	Winter 1990
Consumer spending in urban and rural Canada	Autumn 1990
Where the money goes: Spending patterns in Canada and the U.S.	Autumn 1990

## TRANSFER PAYMENTS

Men retiring early: How are they doing?	Winter 1995
Who gets UI?	Summer 1994
Family income inequality in the 1980s	Autumn 1991
Dependence on government transfer payments, 1971-1989	Summer 1991
Taxes, transfers and regional disparities	Winter 1990
Government transfer payments and family income	Autumn 1990

## UNEMPLOYMENT

Who gets UI?	Summer 1994
A note on the self-initiated training of job-losers	Spring 1994
Alternative measures of unemployment	Winter 1992
A note on Canadian unemployment since 1921	Autumn 1992
Discouraged workers – where have they gone?	Autumn 1992
Unemployment – occupation makes a difference	Winter 1991
Then and now: The changing face of unemployment	Spring 1991

Shifting patterns of unemployment distribution since the 1960s	Autumn 1990
Time lost: An alternative view of unemployment	Spring 1990
Unemployment: A tale of two sources	Winter 1989
"Discouraged workers"	Autumn 1989
Canada's unemployment mosaic	Summer 1989

## UNIONIZATION

A note on wage trends among unionized workers	Autumn 1993
Are jobs in large firms better jobs?	Autumn 1991
Working for minimum wage	Winter 1989
Unionization and women in the service sector	Autumn 1989

## WOMEN

Women as main wage-earners	Winter 1995
Adult women's participation rate at a standstill	Autumn 1995
Women in non-traditional occupations	Autumn 1995
Baby boom women	Winter 1994
Work-related sexual harassment	Winter 1994
Declining female labour force participation	Summer 1994
Left behind: Lone mothers in the labour market	Summer 1994
Balancing work and family responsibilities	Spring 1994
Defining and measuring employment equity	Winter 1993
Employed parents and the division of housework	Autumn 1993
Female lone parents in the labour market	Spring 1993
Women in academia – a growing minority	Spring 1993
A degree of change	Winter 1992
Alimony and child support	Summer 1992
Absences from work revisited	Spring 1992
Women and RRSPs	Winter 1991
Women approaching retirement	Autumn 1991
Who's looking after the kids? Child care arrangements of working mothers	Summer 1991
Women's earnings and family incomes	Summer 1991
Male-female earnings gap among recent university graduates	Summer 1990
Trading places: Men and women in non-traditional occupations, 1971-86	Summer 1990
Wives as primary breadwinners	Spring 1990
Unionization and women in the service sector	Autumn 1989
On maternity leave	Summer 1989

## WORK ARRANGEMENTS

Non-standard work on the rise	Winter 1995
Full-year employment across the country	Autumn 1995
Families and moonlighting	Summer 1995
Hours of working couples	Summer 1995
Work experience	Summer 1995
Ever more moonlighters	Autumn 1994
Involuntary part-timers	Autumn 1994
Jobs! Jobs! Jobs!	Autumn 1994
The hours people work	Autumn 1994
Voluntary part-time workers	Autumn 1994
Weekend workers	Summer 1994
Working "9 to 5"	Summer 1994
Balancing work and family responsibilities	Spring 1994
Flexitime work arrangements	Autumn 1993
Paid overtime	Autumn 1993
Work arrangements of Canadians – an overview	Autumn 1993
Working shift	Spring 1993
Hard at work	Spring 1992
A note on self-employment	Winter 1991
A note on the Work Sharing Program	Winter 1991
Non-standard work arrangements	Winter 1991
Moonlighters	Winter 1989
The changing face of temporary help	Summer 1989

## YOUTHS AND STUDENTS

Labour market outcomes for university co-op graduates	Autumn 1995
Youths – waiting it out	Spring 1994
Labour market outcomes for high school leavers	Winter 1993
School, work and dropping out	Summer 1993
A degree of change	Winter 1992
Juggling school and work	Spring 1992
Apprentices: Graduate and drop-out labour market performances	Spring 1991
Working for minimum wage	Winter 1989
Youth for hire	Summer 1989

## MISCELLANEOUS

Getting there	Summer 1994
The gift of time	Summer 1990



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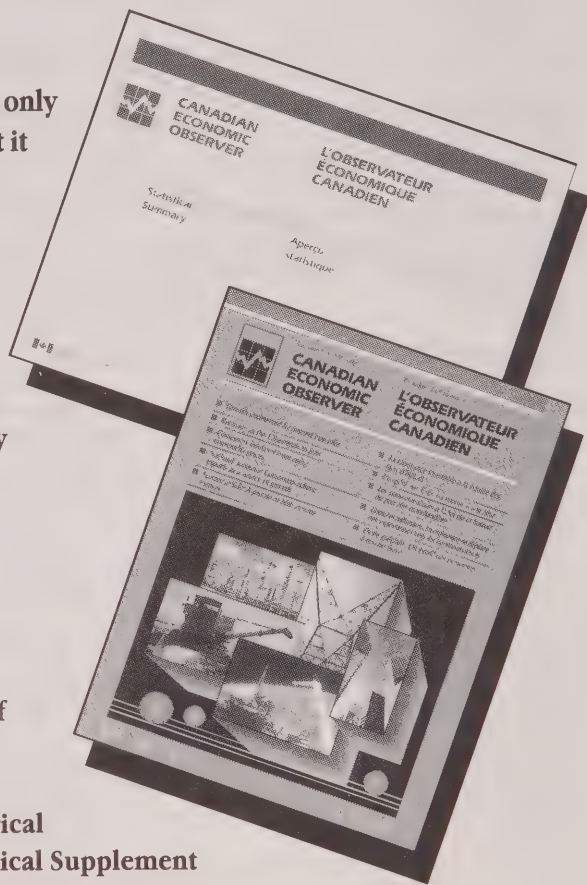
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# Key labour and income facts

The following selection of labour and income indicators is drawn from 11 sources and includes published and unpublished annual data. These indicators appear in every issue.

The latest annual figures are always shown; as results become available, the indicators are updated so that every issue contains new data. An indicator updated or revised since the last issue is "flagged" with an asterisk.

## Data sources

The indicators are derived from the following sources:

- |                  |  |
|------------------|--|
| <b>1-14; 16</b>  | <b>Labour Force Survey</b><br>Frequency: Monthly<br>Contact: Doug Drew (613) 951-4720                          |
| <b>15; 36-46</b> | <b>Survey of Consumer Finances</b><br>Frequency: Annual<br>Contact: Kevin Bishop (613) 951-2211                |
| <b>17</b>        | <b>Absence from Work Survey</b><br>Frequency: Annual<br>Contact: Nancy Brooks (613) 951-4589                   |
| <b>18</b>        | <b>National Work Injuries Statistics Program</b><br>Frequency: Annual<br>Contact: Joanne Proulx (613) 951-4040 |
| <b>19</b>        | <b>Help-wanted Index</b><br>Frequency: Monthly<br>Contact: Adib Farhat (613) 951-4045                          |
| <b>20-21</b>     | <b>Unemployment Insurance Statistics Program</b><br>Frequency: Monthly<br>Contact: Adib Farhat (613) 951-4045  |

- |              |  |
|--------------|--|
| <b>22-29</b> | <b>Survey of Employment, Payrolls and Hours</b><br>Frequency: Monthly<br>Contact: Sylvie Picard (613) 951-4090   |
| <b>30-32</b> | <b>Major wage settlements, Bureau of Labour Information (Human Resources Development Canada)</b><br>Frequency: Quarterly<br>Information: (819) 997-3117                  |
| <b>33-35</b> | <b>Labour income (Revenue Canada, Taxation; Survey of Employment, Payrolls and Hours; and other surveys)</b><br>Frequency: Quarterly<br>Contact: Ed Bunko (613) 951-4048 |
| <b>47-53</b> | <b>Household Facilities and Equipment Survey</b><br>Frequency: Annual<br>Contact: Penny Barclay (613) 951-4634   |
| <b>54-59</b> | <b>Small area and administrative data</b><br>Frequency: Annual<br>Customer Services: (613) 951-9720  |

Notes and definitions related to certain indicators are given at the end of the table.

## Additional data

The table provides, at the most, two years of data for each indicator. A longer time series (generally 10 years) for this set of indicators can be obtained, on paper or diskette, at a cost of \$50. (A more extensive explanation of the indicators is also available.) This 10-year data set is updated quarterly. For information, contact Jeannine Usalcas at (613) 951-6889; fax (613) 951-4179.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Labour market</b>								
1	Population 15 years and over	'000	1993	22,371	454	102	719	589
			1994	22,717	456	103	725	594
	Change	%		1.5	0.4	1.5	0.9	0.9
2	Labour force	'000	1993	14,663	242	66	431	349
			1994	14,832	244	68	438	351
	Change	%		1.2	1.1	1.8	1.5	0.5
3	Participation rate	%	1993	65.5	53.2	65.3	60.0	59.3
			1994	65.3	53.6	65.5	60.4	59.1
4	Employed	'000	1993	13,015	193	54	368	305
			1994	13,292	195	56	380	307
	Change	%		2.1	0.7	3.1	3.1	0.7
	- employed full-time	'000	1993	10,772	166	45	303	257
			1994	11,038	168	47	309	259
	Change	%		2.5	1.5	4.3	2.1	0.9
5	Proportion of employed working part time	%	1993	17.2	14.2	17.3	17.8	15.9
			1994	17.0	13.5	16.3	18.6	15.6
6	Proportion of part-timers wanting full-time work	%	1993	35.7	63.7	--	47.9	50.5
			1994	35.2	59.6	--	46.0	48.5
7	Unemployed	'000	1993	1,649	49	12	63	44
			1994	1,541	50	12	58	44
	Change	%		-6.6	2.5	-4.1	-7.8	-0.4
8	Official unemployment rate	%	1993	11.2	20.1	18.1	14.7	12.6
			1994	10.4	20.4	17.1	13.3	12.4
<b>Alternative measures of unemployment</b>								
9	Unemployed 14 or more weeks as a proportion of the labour force	%	1993	5.6	10.7	7.8	7.0	5.4
			1994	5.1	11.5	7.0	6.0	5.1
10	Unemployment rate:							
	- of persons heading families with children under age 16	%	1993	9.5	19.1	17.9	12.5	11.4
			1994	9.0	19.4	16.1	12.0	11.3
	- excluding full-time students	%	1993	10.9	20.0	18.0	14.3	12.3
			1994	10.1	20.5	17.5	13.1	12.3
	- including full-time members of the Canadian Armed Forces	%	1993	11.1	20.1	17.7	14.2	12.4
			1994	10.3	20.5	17.0	12.9	12.3
	- of the full-time labour force	%	1993	13.9	24.0	21.6	18.3	16.1
			1994	13.0	24.0	20.7	17.1	15.9
	- of the part-time labour force	%	1993	14.4	21.5	13.0	18.0	15.7
			1994	13.3	20.1	11.7	16.4	14.4
	- including discouraged workers and others on the margins of the labour force	%	1993	12.0	24.4	18.9	15.6	14.2
			1994	11.0	24.5	17.7	14.5	13.9
11	Underutilization rate based on hours lost through unemployment and underemployment	%	1993	14.6	24.8	22.3	19.1	17.3
			1994	13.7	24.6	21.5	18.0	17.1
12	Unemployed six months or longer as a proportion of total unemployed	%	1993	30.8	33.3	--	26.9	23.6
			1994	30.2	36.1	--	25.6	24.2

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
5,692	8,447	840	740	2,007	2,782	..	..	1993	'000	1
5,753	8,588	845	745	2,039	2,869	..	..	1994	%	
1.1	1.7	0.6	0.7	1.6	3.1	..	..			
3,546	5,692	561	494	1,436	1,845	..	..	1993	'000	2
3,595	5,707	563	491	1,463	1,913	..	..	1994	%	
1.4	0.3	0.4	-0.6	1.9	3.7	..	..			
62.3	67.4	66.8	66.8	71.5	66.3	..	..	1993	%	3
62.5	66.5	66.6	65.9	71.8	66.7	..	..	1994		
3,080	5,089	509	455	1,296	1,666	..	..	1993	'000	4
3,156	5,160	511	457	1,337	1,733	..	..	1994	%	
2.5	1.4	0.5	0.5	3.1	4.0	..	..			
2,595	4,175	410	372	1,077	1,372	..	..	1993	'000	
2,681	4,264	416	376	1,111	1,405	..	..	1994	%	
3.3	2.1	1.5	1.2	3.2	2.4	..	..			
15.7	17.9	19.3	18.3	16.9	17.6	..	..	1993	%	5
15.0	17.4	18.5	17.7	16.9	18.9	..	..	1994		
42.4	31.9	34.5	37.4	32.2	30.4	..	..	1993	%	6
41.0	32.7	34.3	36.6	31.6	29.7	..	..	1994		
467	604	52	40	139	179	..	..	1993	'000	7
438	547	52	34	126	180	..	..	1994	%	
-6.0	-9.4	-0.6	-13.1	-9.9	0.4	..	..			
13.2	10.6	9.3	8.0	9.7	9.7	..	..	1993	%	8
12.2	9.6	9.2	7.0	8.6	9.4	..	..	1994		
7.2	5.5	4.3	3.4	4.1	4.3	..	..	1993	%	9
6.4	5.0	4.1	3.0	3.3	3.9	..	..	1994		
										10
10.3	8.9	7.6	7.0	9.0	8.0	..	..	1993	%	
10.1	8.4	6.8	6.7	7.2	8.4	..	..	1994		
12.8	10.2	8.8	7.8	9.2	9.5	..	..	1993	%	
12.0	9.2	8.6	6.8	8.2	9.1	..	..	1994		
13.0	10.6	9.2	8.0	9.5	9.6	..	..	1993	%	
12.0	9.5	9.0	7.0	8.4	9.3	..	..	1994		
15.8	13.1	12.2	11.3	11.7	12.0	..	..	1993	%	
14.8	12.0	11.7	10.1	10.6	12.0	..	..	1994		
16.8	14.0	12.3	10.9	14.5	12.5	..	..	1993	%	
14.7	13.5	13.4	9.1	12.5	11.3	..	..	1994		
14.6	11.0	9.9	8.5	9.9	10.1	..	..	1993	%	
13.2	10.0	9.5	7.5	8.7	9.6	..	..	1994		
16.4	13.9	13.0	12.2	12.6	12.7	..	..	1993	%	11
15.3	12.8	12.5	10.9	11.5	12.5	..	..	1994		
34.2	33.4	26.8	23.1	24.5	23.9	..	..	1993	%	12
34.2	32.4	26.3	22.5	22.0	23.8	..	..	1994		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Other labour market indicators</b>								
13	Employment/population ratio for persons aged:							
	- 15 to 24	%	1993	52.3	31.3	51.3	46.9	47.0
			1994	52.5	32.4	53.3	48.4	46.0
	- 25 to 64	%	1993	70.4	53.7	65.6	63.5	64.0
			1994	70.9	53.3	66.5	64.6	64.1
	- 65 and over	%	1993	6.1	--	--	--	--
			1994	6.4	--	--	4.4	--
14	Employment by major class of worker:							
	- employees	'000	1993	10,958	165	44	315	267
			1994	11,180	164	46	325	267
	- self-employed	'000	1993	1,984	28	10	52	37
			1994	2,055	30	10	54	40
15	Men working full year, full time	'000	1992	5,091	65	19	132	118
			1993	5,100	69	19	138	113
	Women working full year, full time	'000	1992	3,423	48	13	96	82
			1993	3,456	49	14	97	75
16	Days lost per full-time worker per year through illness or for personal reasons	days	1993	9.2	9.5	--	9.7	8.4
			1994	9.1	9.2	--	9.4	8.6
17	Proportion of paid workers absent two or more consecutive weeks because of illness or accident	%	1992	5.6	4.1	4.0	5.4	6.0
			1993	5.8	4.8	4.6	6.1	5.5
18	Workers receiving Workers' Compensation for time-loss injuries	'000	1992	456	8	2	12	10
			1993	423	6	2	13	6
	Change	%		-7.1	-21.5	-4.7	9.4	-43.6
19	Help-wanted index (1991=100)		1993	87	82	117	88	89
			1994	97	90	113	95	99
<b>Unemployment insurance</b>								
20	Total beneficiaries	'000	1993	1,292	71	16	63	65
			1994	1,115	60	14	59	61
	Change	%		-13.7	-14.7	-9.9	-6.0	-6.6
21	Regular beneficiaries without reported earnings	'000	1993	931	56	11	44	49
			1994	773	45	10	41	45
	Change	%		-17.0	-18.5	-10.9	-7.2	-7.7
<b>Earnings (including overtime) and hours</b>								
22	Average weekly earnings in current dollars	\$	1993	556.27	524.86	453.91	493.95	502.91
			1994	566.87	530.23	454.02	496.07	501.70
	Change	%		1.9	1.0	-	0.4	-0.2
23	Average weekly earnings in 1986 dollars	\$	1993	426.58	422.93	351.05	388.94	397.24
			1994	433.72	421.82	351.95	386.04	394.11
	Change	%		1.7	-0.3	0.3	-0.7	-0.8
24	Average weekly earnings of salaried employees in current dollars	\$	1993	702.65	638.51	608.29	620.10	636.25
			1994	717.78	635.39	614.06	633.01	644.18
	Change	%		2.2	-0.5	0.9	2.1	1.2
25	Average weekly earnings of salaried employees in 1986 dollars	\$	1993	538.84	514.51	470.45	488.26	502.57
			1994	549.18	505.48	476.01	492.61	506.03
	Change	%		1.9	-1.8	1.2	0.9	0.7

See Notes and definitions at end of table.

# Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
										13
47.0	53.9	58.5	55.6	58.4	57.8	..	..	1993	%	
48.4	52.9	59.1	55.6	59.7	57.7	..	..	1994		
65.4	72.9	74.7	76.8	75.3	72.6	..	..	1993	%	
66.4	72.9	74.5	76.9	76.7	73.0	..	..	1994		
4.1	6.9	7.8	13.1	9.1	5.1	..	..	1993	%	
4.0	7.3	7.6	12.3	8.5	6.5	..	..	1994		
										14
2,638	4,353	420	340	1,050	1,365	..	..	1993	'000	
2,711	4,397	425	343	1,079	1,424	..	..	1994		
427	711	84	106	234	295	..	..	1993	'000	
433	747	82	106	250	304	..	..	1994		
1,237	1,999	199	187	510	624	..	..	1992	'000	15
1,226	1,973	214	185	524	641	..	..	1993		
825	1,393	133	108	325	401	..	..	1992	'000	
835	1,363	130	108	331	453	..	..	1993		
10.2	8.9	9.6	8.5	8.0	9.2	..	..	1993	days	16
9.9	8.7	8.5	8.1	7.4	10.5	..	..	1994		
5.9	5.2	7.8	3.8	5.9	5.8	..	..	1992	%	17
6.3	5.5	5.5	4.3	4.5	7.1	..	..	1993		
146	137	17	12	32	78	--	1	1992	'000	18
135	125	15	12	30	77	--	1	1993		
-7.5	-8.6	-7.3	2.4	-7.8	-1.8	--	9.5		%	
92	86	91	83	80	84	..	..	1993		19
100	101	103	99	89	86	..	..	1994		
404	365	37	29	90	146	2	2	1993	'000	20
356	299	32	24	79	125	2	2	1994		
-12.0	-17.8	-15.5	-16.9	-12.6	-14.1	-20.7	-16.4		%	
302	257	24	20	63	101	2	2	1993	'000	21
258	199	20	16	53	84	1	1	1994		
-14.4	-22.8	-18.6	-20.9	-16.8	-17.0	-23.8	-17.8		%	
538.46	588.71	491.80	472.38	551.89	557.26	679.67	705.54	1993	\$	22
543.08	604.54	499.20	485.17	552.58	577.27	687.26	703.52	1994		
0.9	2.7	1.5	2.7	0.1	3.6	1.1	-0.3		%	
412.62	448.71	377.72	361.15	431.50	423.45	..	..	1993	\$	23
421.97	460.42	378.18	364.24	426.04	430.16	..	..	1994		
2.3	2.6	0.1	0.9	-1.3	1.6	..	..		%	
657.83	751.30	640.01	622.20	714.35	701.34	845.42	822.53	1993	\$	24
666.14	770.38	653.55	647.46	721.59	720.58	845.78	816.29	1994		
1.3	2.5	2.1	4.1	1.0	2.7	-	-0.8		%	
504.08	572.64	491.56	475.68	558.53	532.94	..	..	1993	\$	25
517.59	586.74	495.11	486.08	556.35	536.94	..	..	1994		
2.7	2.5	0.7	2.2	-0.4	0.8	..	..		%	

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
26	Average weekly earnings of hourly paid employees in current dollars	\$	1993	426.05	405.39	296.10	380.70	404.03
	Change	%	1994	437.23	425.50	299.48	378.25	399.91
				2.6	5.0	1.1	-0.6	-1.0
27	Average weekly earnings of hourly paid employees in 1986 dollars	\$	1993	326.72	326.67	229.01	299.76	319.14
	Change	%	1994	334.53	338.51	232.16	294.36	314.14
				2.4	3.6	1.4	-1.8	-1.6
28	Average weekly hours of hourly paid employees	hrs	1993	30.6	33.9	30.5	31.7	33.4
			1994	30.9	33.8	30.8	32.1	33.6
29	Average weekly overtime hours of hourly paid employees	hrs	1993	0.9	1.0	0.4	0.6	0.7
			1994	1.0	1.3	0.3	0.6	0.7
<b>Major wage settlements</b>								
30	Number of agreements		1993	512	15	3	11	3
			1994	407	9	6	14	16
31	Number of employees	'000	1993	1,418	37	6	19	3
			1994	906	28	8	25	28
32	Effective wage increase in base rates	%	1993	0.6	0.1	-	5.1	2.8
			1994	0.3	-	-4.1	-0.5	1.0
<b>Labour income</b>								
33	Labour income in current dollars	\$ million	1993	393.9	5.1	1.3	9.7	7.9
	Change	%	1994	406.2	5.3	1.3	9.9	8.0
				3.1	3.2	2.6	2.4	1.1
34	Labour income per employee in current dollars	\$	1993	35,000	30,700	27,600	30,600	29,200
	Change	%	1994	35,400	32,000	27,600	30,100	29,400
				1.2	4.2	-0.3	-1.4	1.0
35	Labour income per employee in 1986 dollars	\$	1993	26,800	24,800	21,400	24,100	23,000
	Change	%	1994	27,100	25,500	21,400	23,500	23,100
				1.0	2.9	-0.1	-2.6	0.4
36	Net income from self-employment as a proportion of money income	%	1992	5.1	3.4	6.4	3.6	4.2
			1993	5.2	4.4	7.5	4.4	4.0
<b>Earnings of full-year, full-time workers</b>								
37	Average earnings of men working full year, full time	\$	1992	39,500	36,200	32,600	37,600	35,200
	Change	%	1993	39,400	34,700	31,300	38,600	36,800
				-0.1	-4.2	-3.9	2.5	4.6
38	Average earnings of women working full year, full time	\$	1992	28,400	25,200	26,100	24,900	24,700
	Change	%	1993	28,400	24,200	26,100	24,800	22,700
				0.1	-3.9	0.2	-	-8.0
39	Ratio of female-to-male earnings	%	1992	71.8	69.7	80.1	66.0	70.2
			1993	72.0	69.9	83.5	64.4	61.7
<b>Family income</b>								
40	Average family income	\$	1992	53,700	42,100	44,400	46,900	46,500
			1993	53,500	43,000	43,800	46,900	46,900
41	Median family income	\$	1992	47,700	36,800	39,400	40,500	41,700
			1993	47,100	37,700	38,100	41,200	42,200
42	Average income of unattached individuals	\$	1992	23,200	19,600	18,800	18,800	19,000
			1993	23,300	17,100	18,200	20,800	19,300
43	Median income of unattached individuals	\$	1992	17,600	13,900	14,400	13,100	14,300
			1993	17,400	12,400	13,800	16,200	14,200

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
430.71	441.99	369.23	334.57	398.28	442.47	472.15	556.82	1993	\$	26
436.47	458.36	377.62	353.39	400.12	462.15	511.58	575.51	1994		
1.3	3.7	2.3	5.6	0.5	4.4	8.4	3.4		%	
330.04	336.88	283.59	255.78	311.40	336.22	..	..	1993	\$	27
339.14	349.09	286.07	265.31	308.50	344.38	..	..	1994		
2.8	3.6	0.9	3.7	-0.9	2.4	..	..		%	
31.5	30.7	29.7	27.9	29.7	29.0	30.5	32.0	1993	hrs	28
31.6	31.1	30.4	28.8	30.1	29.4	32.2	33.0	1994		
0.8	1.0	0.7	0.7	1.3	0.8	1.7	2.6	1993	hrs	29
0.8	1.2	0.8	0.8	1.4	0.8	1.8	2.4	1994		
119	153	18	14	56	48	..	..	1993		30
32	138	11	11	60	42	..	..	1994		
542	246	41	41	102	103	..	..	1993	'000	31
65	238	11	20	108	96	..	..	1994		
0.1	1.3	0.9	1.1	0.3	2.3	..	..	1993	%	32
1.4	0.3	1.7	1.0	-1.6	1.6	..	..	1994		
90.9	164.6	12.9	9.9	38.7	50.6	0.5	1.3	1993	\$ million	33
93.0	168.9	13.4	10.1	40.3	53.7	0.5	1.3	1994		
2.3	2.6	3.4	2.5	4.0	6.0	3.6	5.2		%	
33,400	37,000	30,400	28,600	35,100	35,600	..	..	1993	\$	34
33,400	37,600	31,100	28,900	35,600	36,200	..	..	1994		
-0.2	1.7	2.2	1.1	1.5	1.8	..	..		%	
25,600	28,200	23,400	21,900	27,400	27,000	..	..	1993	\$	35
25,900	28,600	23,600	21,700	27,500	27,000	..	..	1994		
1.2	1.7	0.8	-0.7	0.1	-0.1	..	..		%	
4.2	5.2	6.6	8.7	4.3	6.3	..	..	1992	%	36
3.8	5.2	6.8	9.3	6.8	5.6	..	..	1993		
37,300	42,200	34,900	32,700	38,700	40,900	..	..	1992	\$	37
36,100	42,200	33,800	32,100	39,600	42,500	..	..	1993		
-3.3	0.1	-3.0	-2.0	2.3	4.0	..	..		%	
27,600	30,400	24,500	23,100	27,200	28,600	..	..	1992	\$	38
26,600	31,100	25,400	24,400	27,300	28,500	..	..	1993		
-3.5	2.3	3.8	5.6	0.3	-0.5	..	..		%	
73.9	71.9	70.2	70.6	70.3	70.0	..	..	1992	%	39
73.8	73.5	75.1	76.1	69.0	67.0	..	..	1993		
48,600	58,800	50,300	48,200	54,700	56,400	..	..	1992	\$	40
47,600	58,500	50,200	47,700	56,500	55,800	..	..	1993		
43,800	52,800	43,700	41,300	47,700	50,300	..	..	1992	\$	41
42,600	52,000	44,800	42,300	49,300	49,100	..	..	1993		
21,100	26,300	18,900	20,300	22,900	23,400	..	..	1992	\$	42
20,700	25,700	20,600	21,000	22,600	25,500	..	..	1993		
15,000	20,300	14,600	14,600	17,700	20,600	..	..	1992	\$	43
15,200	20,200	17,200	15,600	17,400	19,100	..	..	1993		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
44	Average family taxes	\$	1992 1993	10,300 10,200	6,700 6,900	7,100 6,800	8,500 8,400	7,900 8,000
45	Average family income after tax	\$	1992 1993	43,400 43,200	35,500 36,100	37,200 37,000	38,400 38,500	38,600 38,900
46	Proportion below the low income cut-offs (1992 base):							
	- families	%	1992 1993	13.3 14.5	18.4 15.8	7.2 7.6	13.8 14.4	11.5 11.5
	- unattached individuals	%	1992 1993	39.7 40.8	44.5 47.9	38.1 40.0	48.5 36.2	40.3 46.3
	- persons (population)	%	1992 1993	16.8 17.9	20.7 17.9	11.4 11.6	17.8 17.2	14.0 14.8
	- children (less than 18 years)	%	1992 1993	18.9 21.3	26.4 21.3	12.3 11.3	20.5 23.0	15.6 17.7
	- elderly (65 years and over)	%	1992 1993	20.6 22.3	21.7 17.8	14.5 13.3	20.0 17.0	13.8 18.1
<b>Households and dwellings</b>								
47	Estimated number of households and dwellings	'000	1993 1994	10,247 10,387	182 183	47 48	336 332	256 255
48	Average household income	\$	1992 1993	46,800 46,600	39,500 40,200	39,400 38,900	40,600 41,700	41,500 41,900
49	Proportion of households with:							
	- VCRs	%	1993 1994	77.3 79.2	76.9 78.1	74.5 77.1	77.7 81.6	78.9 79.6
	- microwaves	%	1993 1994	79.1 81.5	72.0 76.5	76.6 79.2	79.5 83.4	82.0 84.3
	- two or more automobiles	%	1993 1994	23.8 22.0	14.8 10.9	25.6 22.9	19.4 20.2	21.5 20.0
	- vans & trucks	%	1993 1994	28.4 29.9	33.5 37.2	34.0 37.5	27.7 30.4	36.7 37.6
	- air conditioners	%	1993 1994	25.7 26.8	-- --	-- --	3.9 4.5	10.2 8.2
50	Proportion of all dwellings that are owner-occupied	%	1993 1994	64.1 64.4	78.6 79.8	74.5 72.9	72.3 71.4	76.2 78.0
51	Proportion of all owner-occupied dwellings that are mortgage free	%	1993 1994	48.3 50.3	70.6 69.2	54.3 51.4	53.1 54.0	52.8 57.8
52	Dwellings in need of repair as a proportion of all occupied dwellings	%	1993 1994	22.0 26.3	31.3 32.2	25.6 31.3	27.1 33.5	26.1 30.6
53	Median rent-to-income ratio	%	1993 1994	22 24	16 15	20 22	24 23	19 21

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
9,400	11,700	9,100	8,200	10,200	10,900	..	..	1992	\$	44
9,400	11,400	9,100	8,700	10,400	10,700	..	..	1993		
39,200	47,100	41,200	40,000	44,500	45,500	..	..	1992	\$	45
38,200	47,100	41,100	39,000	46,100	45,200	..	..	1993		
										46
14.8	11.1	14.2	13.8	16.2	13.5	..	..	1992	%	
16.8	13.2	14.3	13.5	15.1	13.9	..	..	1993		
48.9	33.6	48.3	38.3	39.8	34.1	..	..	1992	%	
48.7	36.2	42.0	35.0	42.0	37.3	..	..	1993		
18.7	14.0	19.9	18.1	20.2	17.1	..	..	1992	%	
20.8	16.0	19.1	17.4	18.3	18.1	..	..	1993		
18.3	16.2	23.3	22.8	24.2	19.8	..	..	1992	%	
21.0	21.3	25.2	23.1	20.1	21.8	..	..	1993		
28.9	15.9	23.6	12.1	24.0	20.8	..	..	1992	%	
30.0	20.0	23.0	14.5	21.3	20.5	..	..	1993		
2,688	3,765	387	361	923	1,302	..	..	1993	'000	47
2,720	3,820	397	361	928	1,344	..	..	1994		
41,900	51,800	42,500	41,200	48,000	48,000	..	..	1992	\$	48
40,500	51,500	42,800	40,900	49,600	48,500	..	..	1993		
										49
72.6	79.7	75.5	71.7	82.3	78.6	..	..	1993	%	
74.0	82.1	75.1	75.6	83.0	80.6	..	..	1994		
75.9	80.0	79.8	84.8	84.8	78.0	..	..	1993	%	
79.1	81.5	81.4	85.3	86.7	81.1	..	..	1994		
22.7	25.6	22.5	21.3	26.5	22.6	..	..	1993	%	
20.2	24.2	22.1	20.3	23.7	21.3	..	..	1994		
17.3	25.6	35.7	44.3	44.7	39.2	..	..	1993	%	
19.1	26.8	34.0	46.8	48.4	39.5	..	..	1994		
15.3	44.7	45.7	33.8	8.9	9.1	..	..	1993	%	
15.2	48.1	48.1	31.6	8.2	8.6	..	..	1994		
56.4	64.4	69.5	71.7	67.8	66.1	..	..	1993	%	50
57.0	65.1	70.3	72.3	66.4	65.6	..	..	1994		
46.3	46.6	53.9	60.6	45.7	47.1	..	..	1993	%	51
46.5	49.5	54.5	60.9	49.2	49.8	..	..	1994		
20.7	20.9	26.6	23.8	25.7	20.4	..	..	1993	%	52
24.4	26.1	35.0	28.2	28.2	21.9	..	..	1994		
21	23	22	20	23	25	..	..	1993	%	53
23	25	22	20	21	27	..	..	1994		

See Notes and definitions at end of table.



## Key labour and income facts

No.		Unit	Year	Canada	Nfld.	P.E.I.	N.S.	N.B.
<b>Labour force income profile</b>								
54*	Income:							
	- number reporting	'000	1993	20,423	406	94	663	541
	- amount	\$ million	1993	498,180	7,575	1,882	14,099	10,924
	- median	\$	1993	18,000	13,700	15,900	15,800	14,900
	- Canadian index (of median income)	%	1993	100.0	76.1	88.3	87.8	82.8
55*	Labour force income:							
	- number reporting	'000	1993	14,363	284	70	451	373
	- amount	\$ million	1993	374,483	5,753	1,402	10,336	8,183
56*	Employment income:							
	- number reporting	'000	1993	14,018	268	69	439	362
	- amount	\$ million	1993	357,709	4,869	1,199	9,552	7,344
	- median	\$	1993	20,000	11,300	12,000	16,700	14,700
	- Canadian index (of median employment income)	%	1993	100.0	56.5	60.0	83.5	73.5
57*	Self-employment income:							
	- number reporting	'000	1993	2,103	32	12	55	37
	- amount	\$ million	1993	22,845	316	109	691	351
58*	Unemployment insurance benefits:							
	- number reporting	'000	1993	3,237	134	31	142	139
	- amount	\$ million	1993	16,774	883	203	784	839
<b>Economic dependency profile</b>								
59*	Transfer payments:							
	- amount	\$ million	1993	96,322	2,175	542	3,462	2,828
	- economic dependency ratio (EDR)		1993	26.93	44.68	45.24	36.25	38.51
	- Canadian index (of EDR)	%	1993	100.0	165.9	168.0	134.6	143.0
	Unemployment Insurance benefits:							
	- amount	\$ million	1993	16,774	883	203	784	839
	- contribution to EDR	%	1993	4.69	18.14	16.97	8.21	11.43
	Federal sales tax credits:							
	- amount	\$ million	1993	2,839	69	15	101	85
	- contribution to EDR	%	1993	0.79	1.42	1.26	1.05	1.16
	Child Tax Credit benefits:							
	- amount	\$ million	1993	5,074	124	29	174	148
	- contribution to EDR	%	1993	1.42	2.55	2.43	1.82	2.01
	Old Age Security benefits:							
	- amount	\$ million	1993	12,583	211	62	424	336
	- contribution to EDR	%	1993	3.52	4.32	5.18	4.44	4.58
	CPP/QPP benefits:							
	- amount	\$ million	1993	16,544	254	70	605	421
	- contribution to EDR	%	1993	4.63	5.22	5.80	6.33	5.73
	Other pension benefits:							
	- amount	\$ million	1993	22,319	289	87	822	538
	- contribution to EDR	%	1993	6.24	5.94	7.28	8.60	7.33
	Non-taxable income/provincial tax credits:							
	- amount	\$ million	1993	20,188	345	76	553	461
	- contribution to EDR	%	1993	5.64	7.08	6.31	5.79	6.27

See Notes and definitions at end of table.

## Key labour and income facts

Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Year	Unit	No.
5,168	7,614	802	683	1,836	2,561	19	35	1993	'000	54
115,072	202,098	17,473	14,528	47,449	65,457	537	1,086	1993	\$ million	
16,300	19,900	16,300	15,700	18,900	19,000	22,900	22,000	1993	\$	
90.6	110.6	90.6	87.2	105.0	105.6	127.2	122.2	1993	%	
3,514	5,356	553	486	1,410	1,821	16	30	1993	'000	55
87,062	151,189	12,670	10,249	37,094	49,103	470	972	1993	\$ million	
3,410	5,236	541	478	1,386	1,784	16	30	1993	'000	56
81,835	146,284	12,220	9,876	35,929	47,232	436	935	1993	\$ million	
19,300	22,400	17,900	15,500	19,900	20,800	22,600	24,000	1993	\$	
96.5	112.0	89.5	77.5	99.5	104.0	113.0	120.0	1993	%	
374	761	108	143	272	304	3	2	1993	'000	57
4,773	9,184	975	1,103	2,045	3,257	18	22	1993	\$ million	
983	974	106	85	247	386	5	6	1993	'000	58
5,227	4,906	450	373	1,165	1,871	34	37	1993	\$ million	
23,724	37,895	3,653	3,076	6,923	11,856	72	116	1993	\$ million	59
28.99	25.91	29.89	31.15	19.27	25.10	16.46	12.36	1993		
107.6	96.2	111.0	115.7	71.6	93.2	61.1	45.9	1993	%	
5,227	4,906	450	373	1,165	1,871	34	37	1993	\$ million	
6.39	3.35	3.68	3.78	3.24	3.96	7.82	3.98	1993	%	
775	980	122	106	245	335	2	5	1993	\$ million	
0.95	0.67	1.00	1.07	0.68	0.71	0.53	0.50	1993	%	
1,305	1,681	236	237	525	595	5	17	1993	\$ million	
1.59	1.15	1.93	2.39	1.46	1.26	1.26	1.82	1993	%	
3,069	4,770	593	545	927	1,637	4	6	1993	\$ million	
3.75	3.26	4.85	5.52	2.58	3.47	0.91	0.62	1993	%	
3,790	6,758	686	609	1,215	2,123	7	6	1993	\$ million	
4.63	4.62	5.62	6.17	3.38	4.50	1.52	0.67	1993	%	
4,641	9,574	851	700	1,662	3,138	9	8	1993	\$ million	
5.67	6.55	6.96	7.09	4.63	6.64	2.02	0.82	1993	%	
4,918	9,227	715	506	1,183	2,157	10	37	1993	\$ million	
6.01	6.31	5.85	5.12	3.29	4.57	2.41	3.95	1993	%	

See Notes and definitions at end of table.

## Key labour and income facts

### Notes and definitions

No.

- |   |  |
|---|--|
| <p><b>2</b> Persons aged 15 and over who are employed or unemployed.</p> <p><b>3</b> The labour force as a proportion of the population aged 15 and over.</p> <p><b>4</b> Full-time workers are those who usually work 30 hours or more per week at all jobs combined. Also included are those who work less than 30 hours but consider themselves employed full time (for example, airline pilots).</p> <p><b>5</b> Persons who usually work less than 30 hours per week.</p> <p><b>8</b> The unemployed as a proportion of the labour force.</p> <p><b>9</b> This rate and rates shown as Indicators 10 and 11 are described in <i>Perspectives on Labour and Income</i> (Statistics Canada, Catalogue 75-001E) 4, no. 4 (Winter 1992): 35-43.</p> <p><b>10</b> The full-time labour force includes persons working full time, those working part time involuntarily and unemployed persons seeking full-time work.</p> <p style="padding-left: 20px;">The part-time labour force includes persons working part time voluntarily and unemployed persons seeking part-time work.</p> <p style="padding-left: 20px;">Discouraged workers and others on the margins of the labour force are persons who have looked for work in the past six months, but not during the reference week because they believed none was available or because they were waiting for recall or for replies from employers.</p> <p><b>11</b> The rate shows hours lost through unemployment (unemployed multiplied by average actual weekly hours) and through underemployment (that is, short-time work schedules and involuntary part-time employment) as a proportion of hours worked plus hours lost.</p> <p><b>13</b> The number of persons employed in an age group expressed as a percentage of the population for that age group.</p> | <p><b>14</b> Employees work for an employer for remuneration, usually in the form of a wage or salary.</p> <p style="padding-left: 20px;">Self-employed workers are working owners of incorporated or unincorporated businesses with or without paid help.</p> <p><b>30</b> Data are for agreements involving bargaining units of 500 or more employees. The total includes federal and provincial agreements.</p> <p><b>33</b> Labour income comprises gross wages and salaries (including directors' fees, bonuses, commissions, gratuities, taxable allowances and retroactive pay) and supplementary labour income (payments made by employers for the benefit of employees, including contributions to health and welfare schemes, pension plans, Workers' Compensation and Unemployment Insurance).</p> <p><b>34</b> Labour income per employee is calculated using Labour Force Survey estimates of paid workers excluding those absent without pay during the entire reference week.</p> <p><b>46</b> For an explanation of the methodology underlying the low income cut-offs, see <i>Income Distributions by Size in Canada</i> (Statistics Canada, Catalogue 13-207).</p> <p><b>53</b> The median rent-to-income ratio refers to rent in the reference year divided by income in the previous year.</p> <p><b>54-59</b> Data are derived from tax returns filed in the spring of the year following the reference year. The mailing address at the time of filing determines the province.</p> <p style="padding-left: 20px;">Economic dependency ratio:</p> $\text{EDR} = \frac{\text{Total transfer payments}}{\text{Total employment income}} \times 100$ <p style="padding-left: 20px;">(Example: An EDR of 26.93 indicates that for each \$100 in employment income earned by Canadians in 1993, an additional \$26.93 of income was received in the form of transfer payments.)</p> |
|---|--|



# In the works

*Here are some of the topics to be featured in upcoming issues*

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## ■ The labour market: Year-end review

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A wrap-up of changes and trends in the labour market in 1995.

## ■ Unemployment within families

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The official unemployment rate released each month is based on individuals. Also released, but less recognized, are family-based rates. This study compares unemployment rates for individuals and families using data from two different sources over the period 1980 to 1993.

## ■ Characteristics of unionized workers

---

A look at trends in unionization rates by industry over the last two decades. Also examined are the changing demographic and labour market characteristics of union workers over the period 1984 to 1990.

## ■ Women entrepreneurs

---

Who are they? Where do they work? And how do their earnings compare with those of men in similar circumstances? This article looks at industry and occupation data to determine the extent to which patterns of self-employment differ between women and men, and how these patterns have changed over time.

## ■ Are service jobs low paying?

---

Many people believe that service jobs are synonymous with low wages. This study compares the average weekly earnings of workers in the service industries with those in the goods sector to examine the validity of this perception.

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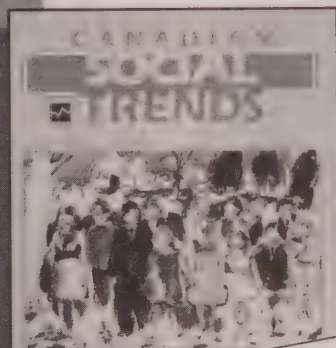
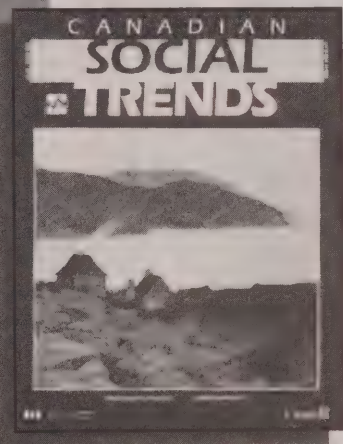
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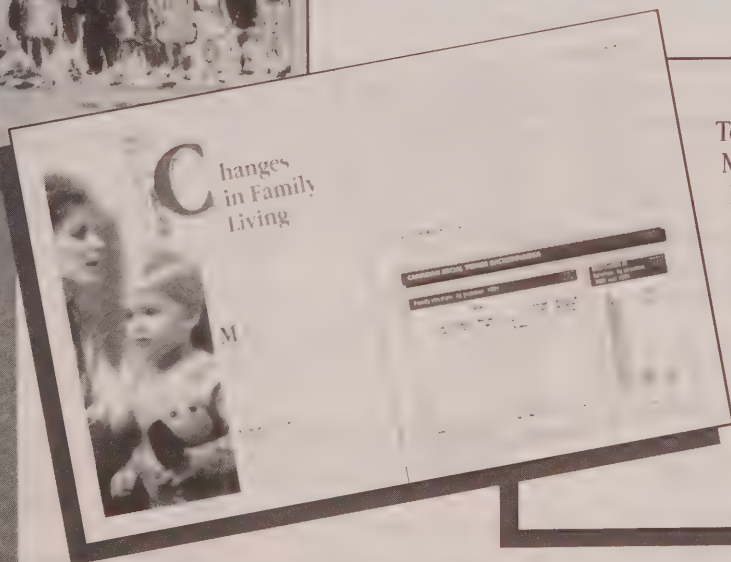
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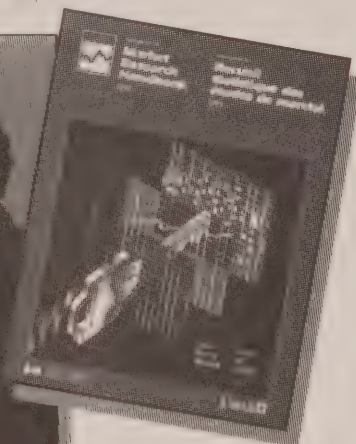
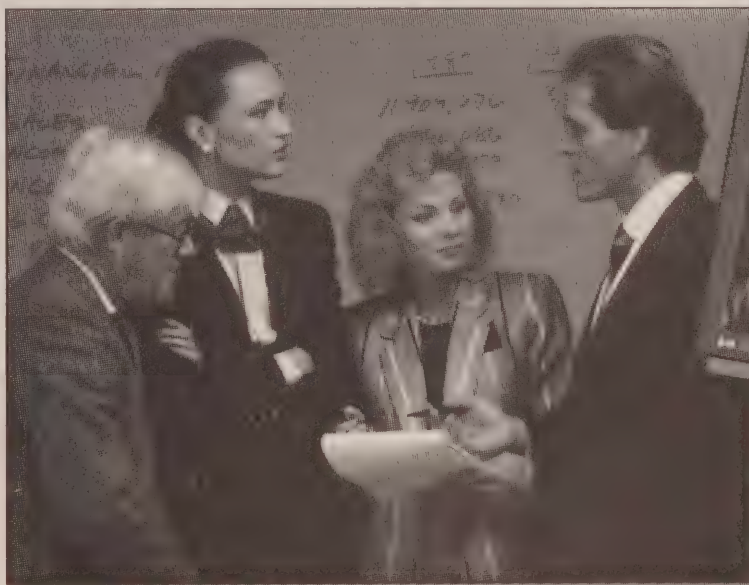
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